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HISTORY

OF THE

NORTHERN PACIFIC RAILROAD

BY

EUGENE V. SMALLEY

NEW YORK
G. P. PUTNAM'S SONS
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PREFACE.

WHEN the project of a railroad across the American Continent was first broached, and for many years afterward, the northern route, by way of the valleys of the Missouri and the Columbia rivers, was the only one thought of. This was the route explored by Lewis and Clarke in the first decade of the century. It was known to be a route through valleys and over plains for nearly its entire distance; it crossed the Rocky Mountain barriers at low altitudes; it approached the Pacific by way of the greatest river of the western coast; at its farthest limit lay the most capacious and beautiful deep-water tidal estuary to be found on the continent. It avoided the deserts lying further south, and was believed to traverse the only continuously habitable belt of country stretching from the Mississippi to the Pacific coast. Long before the epoch of rail transportation this route had been explored for military and commercial purposes by the United States Government. Very soon after the railway system was introduced in the United States—indeed as early as 1835—it was advocated by Dr. Barlow. Between 1845 and 1849 it was pressed upon the attention of Congress and State Legislatures by the earnest, persistent and self-sacrificing efforts of Asa Whitney. The ideas of Whitney were taken up in 1852 by one of the ablest of the world's great engineers, Edwin F. Johnson, and given practical form and value by the aid of his genius and technical skill. All this happened before any definite business plan had been formed for building the road, and much of it long before any other route was discussed.

The acquisition of territory from Mexico, following the war of 1846–8, the gold discoveries in California and the rush of population to that region, and later certain important political considerations resulting from the war of the Rebellion, caused the support of the government to be given to the middle route. Thus the first railroad completed to the Pacific terminated at the Bay of San Francisco, instead of at Puget Sound or the mouth of the Columbia River. The northern route was long neglected. Although a grant of land was made in its behalf two years after the two companies were chartered to build the middle line, one transcontinental highway appeared to be sufficient for the time; and the one which was supported with heavy subsidies of government bonds, and large land grants, and ran to the romantic shores of the Golden State, easily secured and monopolized public interest and confidence. The northern project languished for want of support, and more than once came near being abandoned in despair by its few earnest advocates. After capital had finally been secured to begin work upon it, and its advantages had been fairly set before the public, the enterprise had to encounter fresh vicissitudes. It was overwhelmed in the financial crash of 1873, and struggled for many years after being rescued from bankruptcy to merely hold the unfinished lines it had built. Before it could regain the confidence of capital and push forward to a connection in the Rocky Mountains its widely separated "ends of track" a second Pacific road had been opened by the Southern route, built by California capitalists with wealth acquired from the generosity of the government toward the first line.

Thus the Northern Pacific Railroad, though the first projected of three great transcontinental lines, is the last to be completed. Yet time has justified the wisdom of Thomas Jefferson in causing the route it follows to be explored as the best natural highway for commerce from ocean to ocean, and justified, too, the foresight of Whitney and the engineering skill of Johnson in claiming in advance of its actual survey that it offered the best line for railroad construction and traffic.

A history of the Northern Pacific enterprise should be something more than an account of the efforts of adventurous capitalists and energetic railway builders to open a great transportation line across the continent. It should be, in its beginning at least, the history of a national movement to find an outlet to the western sea. In this spirit I have endeavored to treat the subject. No other railroad enterprise ever enlisted among its stockholders so numerous and widely scattered a constituency; no other ever attracted for so long a period so large a share of public attention; no other of considerable magnitude ever passed successfully through such vicissitudes and perils; no other ever developed so vast an area of country adapted for the uses of civilized man, and I believe no other is destined to reap such great and lasting prosperity.

E. V. S.

NEW YORK, August, 1883.

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EARLY EXPLORATIONS IN THE NORTHWEST.

Who First Reached the Head of Lake Superior—Grosellier and Redisson—Daniel Greysolon Du Luth—Meeting with Father Hennepin—Captain Jean Du Luth and his Trading Post—Baron Lahontan's Travels—Opening of the Fur Trade—Veranderie's Settlement on Red River—Jonathan Carver's Expedition—Alexander Mackenzie's Explorations—The Search for the Sources of the Mississippi—Expeditions of Long and Pike—Attempt of General Cass—Schoolcraft's Success.

THE credit of being the first white man to visit the head of Lake Superior was formerly claimed for Daniel Greysolon Du Luth, a French officer, but researches in Paris in the government archives, the results of which have lately been put in print, show beyond question that two adventurous French traders, named Grosellier and Redisson, reached the upper end of the lake twenty-one years before Du Luth, and, pushing on up the St. Louis River, went across the country to Mille Lacs. They returned to Montreal, but, being ignorant men who had kept no journals, no record was made of their discoveries save what the Jesuit fathers took down from their conversations. We may therefore regard Grosellier and Redisson as the first explorers of any portion of the region now traversed by the Northern Pacific Railroad. The early French voyageurs gave the name of Grosellier to the River Nemiscan, on which Fort Rupert stands, but custom has restored the Indian title.

Du Luth left Quebec September 1st, 1678, to continue discoveries in the country west of Lake Superior. Father Marquette had already visited the lower end of the great lake and the Jesuits had planted a mission on its outlet at the Sault Ste. Marie. Du Luth left the head of the lake in 1680, ascended the St. Louis, made the portage to Mille Lacs, and went down the St. Francis River. On the St. Francis he met the expedition under Sieur Dacan, with which was Father Hennepin, the Franciscan friar, who got rather more credit than he deserved for discovering the Upper Mississippi by publishing a book of travels. In a later edition of Hennepin's book the author falsely claimed to have descended the Mississippi to its mouth. He seems to have acquired the art of lying after he returned to Europe and had read the exaggerated and often fictitious narratives of travel current at that time. At all events his account of his journey to the Upper Mississippi is truthful.

There was also a Captain Jean Du Luth, presumably a brother and comrade of Daniel Greysolon Du Luth. This Captain Jean built a trading post at the mouth of Pigeon River, near the Grand Portage, and there is a tradition that at one time in the course of his career as a trader he put up a log cabin on Minnesota Point, where the present town of Duluth stands. Whether the town was named for Jean or Daniel is a question which the antiquarians of the place must settle for themselves.

After Hennepin and the Du Luths came Le Sueur, in 1683, who explored the country thoroughly, opened trade relations with the Sioux, then inhabiting it, and built a fort on Lake Pepin in 1695. As early as 1687 a tolerably correct map of the region immediately west and north of Lake Superior was made by Franquelin, an expert topographer sent out for the purpose. A copy of this map may be seen in the New York State Library.

Something should also be said here of the travels of Baron Lahontan, an adventurous Frenchman, who campaigned against the Indians in the latter part of the seventeenth century all along the shores of the Great Lakes, from Fort Frontenac, on Lake Ontario, to Mackinac. He was a good writer as well as a stout fighter, an excellent *raconteur*, a sharp satirist, and an aggressive rationalist, who might be classed with the Voltaire school if he had not lived before Voltaire's time. Returning to Europe after nearly twenty years' service in America, he published at The Hague, in 1703, a curious book, partly devoted to describing his journeys and adventures on the frontier, and partly to reports of imaginary conversations between an Indian philosopher and a pious Jesuit, on the subject of religion, in which the gentle savage always got the better of the argument. This book, with its curiously distorted maps and its pictures of Indian life, is regarded as a great treasure by collectors. In one of its chapters Lahontan describes a journey from Mackinac, in 1669, to Green Bay, and thence by the Fox River and across the Portage to the Wisconsin, down the Wisconsin to the Mississippi, and up the Mississippi to a river he called Long River. He professed to have sailed up this stream for a month, visiting numerous Indian towns, and he made a map of it, on which it appears to be a mighty river heading in high mountains somewhere out on the plains of Dakota. It is an open question whether the Baron ever went up the Mississippi at all, or whether he actually entered the mouth of one of the Minnesota streams, and drew on his imagination for the rest. From the fact that the map, described as a copy of one drawn on stag-skin by an Indian, shows a second large river heading in the mountains and running westward, it may be inferred that Lahontan got from the savages some account of the Upper Missouri, the Rocky Mountains, and the Columbia River, and carelessly or purposely confused a minor affluent of the Upper Mississippi with the mighty stream heading in the dividing ridge of the continent. Lahontan's book was translated into English and republished in London. It attracted much attention, and for a long time confused the ideas of geographers concerning the Northwest.

Not long afterward, the eager quest for the valuable furs of the Northern regions of the American continent led to the opening of a commercial route from the northern shore of Lake Superior, by what was known as the Grand Portage and by a chain of small lakes and rivers, to the Lake of the Woods, Lake Winnipeg, and the Saskatchewan country. Regular trading posts were established, and the Catholic missionaries, as daring and energetic as the traders, carried the religion of France wherever its flag went. The French Canadians and half-breeds who traversed the northern wilderness to traffic with the Indians for furs were called *Coureurs du Bois.* They made regular journeys from Montreal to Lake Winnipeg by way of the Ottawa River, Lake Nipissing and the French River to the Georgian Bay on Lake Huron, and thence by the St. Mary's River and Lake Superior and the Grand Portage to their destination. When Canada fell into the hands of Great Britain the Northwest Fur Company was organized, and controlled the regions north and west of Lake Superior by a system of posts and lines of canoe travel for transporting merchandise and peltries.

The first settlement on the Red River of the North was made by a French officer named Veranderie, who ascended the stream in 1728 and built a fort on its bank. Following him came Legardeur de St. Pierre, who in 1750 visited the country between Lake Superior and the Red River and made treaties with the Indians.

The first English attempt to explore the country west of the great lakes was that of Jonathan Carver, who started from Connecticut in 1763 with the avowed intention of going across the continent to the Pacific. He went as far as the Minnesota River, and, returning in safety, printed an account of his travels—as was the fashion of the time—which attracted considerable attention in Europe.

The next notable explorer of the Northwest was the Scotchman Alexander Mackenzie, who was the first white man to cross the North American continent at a higher latitude than the Spanish possessions in Mexico. Mackenzie was in the service of the Northwest Fur Company. He started from Montreal in 1789, and reached the Arctic Ocean at the mouth of the great river named in his honor. Returning to Fort Chipewyan, on the Lake of the Hills, where the company had a trading post, he remained there until 1792, when he ascended the Peace River to its source in the Rocky Mountains, crossed the mountains and descended a small stream which puts into a bay on the Pacific coast, just above Queen Charlotte's Sound.

Mackenzie's account of his travels, published in 1801, was accompanied by a good map, which is an excellent index to the information then current about the geography of the northwestern portions of the American continent. The Hudson's Bay country, with the rivers putting into the bay and the numerous lakes they drain, was nearly as accurately mapped then as now, but the whole region south of the British boundary, from the Red River of the North to Puget Sound, was almost a blank. The Missouri had been ascended by traders as far as the mouth of Knife River, where the Mandan Indians had a village. Beyond that point nothing appears on the map save the ridge of the Rocky Mountains and the course of the Columbia River as far as a ship could sail up with the tide.

As late as the third decade of the present century, the sources of the Mississippi were sought by explorers with much of the zeal and spirit of adventure which characterized the search for the sources of the Nile. The portion of Minnesota west of Lake Superior and north of the present line of the Northern Pacific Railroad is thickly dotted with small lakes, varying greatly in size and shape and enveloped in pine forests. In one of these lakes it was known would be found the ultimate source of the great river, but it was a long time before the right one was discovered.

In 1807, when Lewis and Clarke were crossing the continent, the United States Government commissioned Lieutenant Zebulon M. Pike to examine the sources of the Mississippi. He went up to the Falls of St. Anthony and followed the river to Leech Lake, where his party was received with enthusiasm at a camp of trappers and fur hunters from Canada. After visiting Red Cedar Lake Pike returned to St. Louis, his journey having occupied nine months. He subsequently ascended the Arkansas River to the mountains, and entering Spanish territory was captured with his ragged and half-starved followers, and escorted across Texas to Natchitoches in Louisiana. One of the loftiest peaks of the Rocky Mountain chain bears his name.

In 1820 General Cass, then Governor of Michigan Territory, took up the search for the source of the Mississippi, and leaving Detroit with twenty experienced woodsmen and voyageurs proceeded to the head of Lake Superior, and crossed the forests to the Mississippi by the route of the Canadian fur traders. Cass followed the river for 150 miles to Lake Winnipeg (not the large lake of the same name in the British territory, it should be understood), and going still further discovered and named Lake Cass. Here his provisions were so nearly exhausted that he deemed it prudent to return.

In 1828 the government sent Major Long with an expedition to explore the Upper Mississippi country. Long had previously followed up the Platte to the Rocky Mountains, and left his name on Long's Peak. He went up the Mississippi from St. Louis to the mouth of the St. Peter's River, and, making his way up that stream to its source, crossed the country to Crooked Lake, Rainy Lake, and the Lake of the Woods, and arrived at the watershed from which the streams run northward to Hudson's Bay. He then turned back, reached Lake Superior, and returned east by the way of the Sault Ste. Marie.

In 1832 another expedition was sent out by the government, under the command of Schoolcraft, the traveler and student of Indian customs and languages. Leaving the head of Lake Superior in June, he two months later reached Lake Itaska, called by the French Lac de la Biche, which he determined to be the source of the Mississippi. Thus a region traversed by the French voyageurs nearly two hundred years before was at last definitely known and mapped.

CHAPTER II.

DISCOVERY OF THE COLUMBIA RIVER AND PUGET SOUND.

Tradition of the River of the West—Fictitious Spanish Claim of Discovery—Captain Gray and the Ship *Columbia*—Captain Kendrick's Discovery—Vancouver's Mistake—Gray Sails into the Columbia River—His Log-book Entry—Expedition of the British Brig *Chatham*—The Tale of the Greek Pilot Juan de Fuca—Da Fonte's Pretended Discoveries—Vancouver's Explorations—Puget Sound Mapped and Named—Voyages of Lopez de Haro and Elisa.

A TRADITION early came across the continent from tribe to tribe of Indians to the French and English explorers and trappers, that a great river had its sources in the Rocky Mountains near the headwaters of the Missouri, and ran westward into the Pacific. The Spanish missionaries and adventurers who established themselves at Monterey and on the Bay of San Francisco in California, heard the same reports. The unknown stream was spoken of as the River of the West, but no white man had seen its mouth, or any part of its course, or any of its tributaries. The Spaniards, when they began to push their explorations north of San Francisco, gave a name to the great river without having found it, calling it the San Roque. Indeed, after it had been found by an American, they set up a claim to priority of discovery, and asserted that in 1775 one of their corvettes, the *San Jago*, commanded by Captain Don Bruno de Heuta, had entered its mouth. The claim was not confirmed. Probably the Spanish captain put into one of the bays on the Oregon coast, and thought the mysterious San Roque of the Madrid map might flow into its head, but lacked the enterprise to sail up it and see. In 1788 an English captain sailed straight past the mouth of the river, gave Cape Disappointment its name, and reported that there was no river there at all, but only an inlet, with a sand spit blocking its entrance.

In 1789 two Boston trading ships came out to the Northwest coast. One was the *Washington*, commanded by Robert Gray, and the other the *Columbia*, commanded by John Kendrick. Their object was to gather furs from the Indians, exchange them in China for teas and other commodities, and then return to Boston. This venturesome expedition was fitted out by six merchants, Joseph Barrell, Samuel Brown, Charles Bulfinch, John Derby, Crowell Hatch, and J. M. Pintard, and grew out of a talk about Captain Cook's voyages, and what that famous navigator had written about the fineness and beauty of the sea-otter skins found in abundance on the Northwest coast, and the high price they commanded in China. On the way to Nootka Sound, then the resort of whaling vessels on the North Pacific coast, Captain Gray thought he saw indications of the mouth of a great river near latitude 46°. The two ships wintered in the Sound, and the next spring Captain Gray took the furs they had bought, and, loading the *Columbia*, sailed to China, leaving Captain Kendrick with the *Washington* to gather another cargo. Kendrick demonstrated, during his companion's long absence, that Nootka was an island, and not the mainland, by sailing down the Gulf of Georgia and the Canal de Haro, to the Straits of San Juan de Fuca, and thence out to sea. The island was soon after called Quadra, or Vancouver's Island, in honor of both the commandants at Nootka, whose master, the King of Spain, then claimed the country, and of the English naval officer sent out to explore the Northwest coast. Kendrick, in this voyage, passed the entrance to the beautiful inland sea now known as Puget Sound. He got no credit for the discovery, however, for Vancouver's maps and books, which soon after made the region known to the world, made no mention of his name.

Captain Gray, in the *Columbia*, arrived at Boston in 1790. He was the first American to carry the flag of the young republic around the globe. The merchants lost money on their venture, but they refitted the ship and sent her back around the Horn. She arrived in 1791 in Fuca's Strait, and rejoined her consort, the *Washington*. In the spring of 1792, Captain Gray sailed southward to search for the river whose mouth he thought he saw in 1789. Cruising down the coast, he met Captain Vancouver's ship going northward. One of the British officers came aboard the *Columbia*, and Gray spoke of his belief that there was a great river emptying into the Pacific at about the 46th parallel. Vancouver gave no credit to this idea. He had sailed by the supposed river in clear weather and in broad daylight. It seemed absurd that a Yankee skipper could discover a river which a British exploring expedition had not been able to find.

The ships parted. Gray kept on to the southward. He thought he knew river water from sea water, and was sure he had seen signs of a river's mouth on his former voyage in a bay he had passed. His persistence was rewarded, and on the 11th of May he passed safely over the bar he had before observed, and beheld the great mysterious, long-sought stream, stretching away to the east. Like a good patriot he named the two points of land at the entrance, Adams and Hancock, for the two greatest Massachusetts statesmen of the time. Then he came to anchor and wrote in his log-book:

"At four o'clock in the morning of the 11th beheld our desired port, bearing east-south-east, distant six leagues. At eight A.M. bearing a little to the windward of the entrance of the harbor; bore away and ran in east-north-east between the breakers, having from five to seven fathoms of water. When we were over the bar, we found this to be a large river of fresh water, up which we steered. Many canoes came alongside. At one P.M. came to with the small bower in ten fathoms; black and white sand. The entrance between the bars bore west-south-west, distant ten miles; the north side of the river distant a half mile from the ship; the south side of the same, two and a half miles distant; a village on the north side of the river, west by north, distant three-quarters of a mile. Vast numbers of the natives came alongside; people employed pumping the salt water out of our water-casks, in order to fill with fresh, while the ship floated in. So ends."

Little did Captain Gray know at the time how important this entry in his log-book, with its careful account of distances and bearings, would become. It gave the great river of the Pacific slope to the American Republic, determining in after years the claim of the United States to its mouth, when the boundary line of the British possessions on the northwest coast came to be defined.

With a true sailor's love for his ship, Gray gave her name, Columbia, to the river. The Indians called it the Oregon, and for a time there was a struggle on the maps between the old name and the new, but of late years the strong, sonorous Indian term survives, as applied to the stream, only in Bryant's poem of "Thanatopsis." Gray remained in the river for ten days trafficking for furs and salmon. He sailed up stream for fifteen miles, and ran aground among the islands above Tongue Point, but got off safely. Leaving the river's mouth on the 20th of May, he ran up to Nootka Sound, the favorite harbor for trading vessels, and reported his discovery to the Spanish Commandante, Quadra.

In October of the same year one of Vancouver's vessels, the brig *Chatham*, commanded by Lieutenant Broughton, was dispatched to the Columbia River from Puget Sound, which the English and Spanish were both surveying, both nations at that time claiming the region by right of prior discovery. Broughton sailed up the river as far as the site of the present town of Vancouver. In the controversy which afterward arose between the British and the American governments over the title to the Oregon Territory, the British, not being able to disprove the fact of Captain Gray's first entrance to the river's mouth, denied that the Columbia was a river below Tongue Point, asserting that it was there an inlet or sound, and that the real river had been first seen by Lieutenant Broughton. This preposterous claim was overthrown by the log-book of the *Columbia* and the testimony of Commandante Quadra. Gray's memory is perpetuated by the name of the little bay in which he first cast anchor and the small river jutting into it, and also by the name of Gray's Harbor, a large bay on the coast north of the Columbia.

Whether rightly or wrongly, the Greek pilot Juan de Fuca gets honor on the maps for the discovery of the body of water generally known as Puget Sound. His name is applied to the broad strait which, putting in straight west from the ocean between the rocky coast of Vancouver's Island on one side and the bold mountains of the Olympian chain on the other, gives access to the deep channels, spacious inlets, winding canals and countless sheltered coves and green islands of the Sound. Yet nobody knows to a certainty that the Greek ever saw the strait. There is no evidence save his own assertion, and whatever of truth he told was badly diluted with lies. His real name was Caposiolus Valerianos de

Fuca, but when he entered the Spanish service, toward the close of the sixteenth century, he found it convenient to adopt the familiar name of Juan; or perhaps the Spanish officers, despairing of the pronunciation of his real appellation, called him Juan, as Californians call all Chinamen John. Being at Venice in 1596, De Fuca gave to an Englishman, Michael Locke, an account of his last voyage. He said that he was sent from Acapulco, Mexico, in 1592, with a caraval and a pinnace, to find a communication between the Pacific and the Atlantic; that he sailed northward, and between latitude 47° and 48° perceived a large opening which might be a strait; this he entered and sailed for twenty days. In some places the land bore to the northeast and in some to the northwest. He saw a great number of inhabitants clad in the skins of beasts. The country seemed fertile and abounded in gold, silver and pearls. He continued his course and reached the Atlantic Ocean. This tale was written down by Locke and sent to England. It was discredited there, and with reason, and was long regarded as a pure fiction, but in later times it has been thought not improbable that De Fuca really entered the strait which bears his name, and, wishing to magnify the importance of his exploit, pretended that it was the long-sought passage between the two oceans.

Half a century later the Spanish Admiral Da Fonte professed to have discovered in latitude 53° a large river which he named Rio de las Reyes, and pretended to have ascended to a great archipelago, and further to a mighty waterfall and a big lake near Hudson's Bay. He, too, was a liar, like most of the braggart crew of Spanish voyagers of his time, but his story may have had the foundation of fact of an actual entrance to Puget Sound.

Whatever truth there was, however, in the narrative of the Greek pilot and the Spanish admiral, it is certain that the world knew nothing definite about the strait or the sound until Captain George Vancouver of the British navy explored them in 1792. Vancouver, who had accompanied Captain Cook on his second and third voyages, was sent out from England in 1791, with two vessels—the *Discovery* and the *Chatham*—to explore the western coast of America. He failed to find the Columbia River, as we have seen in the last chapter, but sailed into the strait on the 30th of April, 1792, and called it on his map the "supposed Strait of Juan de Fuca." Later mapmakers omitted the word "supposed," and thus the name of the lying Greek was perpetuated and permanently attached to one of the most magnificent tidal channels of the world. On some maps he is given the odor of sanctity by having the prefix "San" to his name.

Vancouver anchored in Port Discovery, and while his ships were being calked explored the sound with boats. He distributed lavishly upon mountains, bays, inlets and islands the names of his friends in England and of the officers of his vessels. Even the midshipmen came in for a share of these easy honors. Mount Rainier he named after Rear Admiral Rainier, Mount Baker and Whidby's Island after two of his lieutenants, Hood's Canal after the Right Honorable Lord Hood, Port Townshend (it should be spelled with an *h*) "in honor of the noble Marquis of that name;" Vashon's Island after his friend Captain Vashon of the navy, Mount St. Helens after Lord St. Helens, and so on. Lieutenant Puget's name was rightly given to the crescent-shaped body of water at the southern end of the beautiful inland sea—he having commanded the boat which discovered it. The main entrance from the strait was called Admiralty Inlet, and so it appears on the maps to this day, but custom has long since applied the name Puget Sound to the whole tidal estuary with all its ramifications. Returning to England, Vancouver died in 1798, at the age of forty-one. The narrative of his voyage was published by his brother John the same year and dedicated to the King.

A few years before Vancouver explored the waters of the sound, two Spanish navigators sailed through the wide strait separating Vancouver's Island from the mainland, starting from Nootka Sound, where their country had a military post. In 1789 Lopez de Haro discovered the archipelago and canal which bear his name, and in 1791 Elisa sailed around the islands and gave names to San Juan and Lopez Islands and probably to Fidalgo, lying south of the group, and to Rosario Strait. Neither of these navigators brought back any knowledge of the waters of Puget Sound.

CHAPTER III.

THE LEWIS AND CLARKE EXPEDITION.

Thomas Jefferson's Efforts to Open a Route to the Pacific—Ledyard's Attempt Baffled—Captain Lewis' First Project—Congress Provides for an Exploration—Character of Lewis—Captain William Clarke—The Expedition Organized—Its Route, Adventures, and Arrival at the Mouth of the Columbia—The Return Journey—Great Interest in the Results of the Expedition.

TO Thomas Jefferson belongs the honor of planning and setting on foot the enterprise of exploring the interior continental region on the line now followed by the Northern Pacific Railroad. When in Paris as American Envoy he made the acquaintance of John Ledyard, who had accompanied Captain Cook on one of his voyages. Jefferson proposed to Ledyard that he should cross Russia to Kamtchatka, take passage in a Russian trading vessel to Nootka Sound, "fall down into the latitude of the Missouri River, and penetrate to and through that to the United States." Ledyard eagerly seized the idea, and by Jefferson's assistance he obtained the protection of the Empress Catharine, and started on his journey. When two hundred miles from Kamtchatka he was arrested by an officer of the Empress, who had changed her mind after his departure, put into a close carriage, and taken as a prisoner to Poland. When released, with health broken by the hardships he had been subjected to, he was glad to relinquish his project and leave the Russian territories. Subsequently he went to Africa and died at Cairo.

Jefferson held fast to his idea of opening the interior of the continent by the route of the Missouri and the Columbia rivers. In 1792 he proposed to the American Philosophical Society a subscription to engage some competent person to explore the region in an opposite direction from that which Ledyard designed to take, had he reached the American shore of the Pacific. Captain Meriwether Lewis, a young officer of good Virginia family, whose uncle had married a sister of Washington, urged Jefferson to obtain for him the charge of the expedition. Jefferson thought only one companion should go with him, because a larger party might excite suspicion and hostility among the Indians. André Michaux, a French botanist and author of the "*Flora Borealis Americana*," offered his services and proceeded as far as Kentucky, with the purpose of meeting Lewis at St. Louis, when orders from the French Minister reached him directing him to abandon the expedition.

Jefferson became President in 1801, and on his recommendation Congress in 1803 voted a sum of money "for sending an exploring party to trace the Missouri to its source, to cross the Highlands, and follow the best water communication which offered thence to the Pacific Ocean." Captain Lewis had then been with Jefferson two years as his private secretary. He renewed his application to have the direction of the expedition, and the President readily granted the request. In a biographical sketch, written by Jefferson and prefaced to the published journal of the expedition, the character of Lewis is thus described: "I had now had the opportunity of knowing him intimately. Of courage undaunted, possessing a firmness and perseverance of purpose which nothing but impossibility could divert from its direction; careful as a father of those committed to his charge, yet steady in the maintenance of order and discipline; intimate with the Indian character, customs, and principles; habituated to the hunting life, guarded by exact observations of the vegetable and animal life of his own country against losing time in the description of objects already possessed; honest, disinterested, liberal, of sound understanding and a fidelity to truth so scrupulous that whatever he should report would be as certain as if seen by ourselves. With all these qualifications, as if selected and implanted by nature in one body for this express purpose, I could have no hesitation in confiding the enterprise to him."

Captain Lewis selected for the second officer of the expedition his friend William Clarke, a Virginian by birth, then living in Pennsylvania, and President Jefferson commissioned him a captain in the army. The two leaders were of about the same age, Lewis being thirty and Clarke thirty-four at the time the expedition set out, Lewis' choice proved fortunate in all respects. Clarke was intelligent, courageous, persevering, and cool-headed. Commanding on many occasions an advance guard of the party, and returning with a detachment for nearly a thousand miles by a different route from that pursued by his chief, he displayed excellent judgment in his dealings with the Indians, whose hostility might have destroyed the expedition, great fortitude in enduring hardships, and an enterprising spirit which surmounted all obstacles. Indeed, it is difficult to say which of the two captains is entitled to the larger credit, and history has rightly declined to discriminate between them, and has coupled the names of both with the great enterprise they conducted.

President Jefferson's intelligent interest in the expedition led him to prepare with his own hand a long and careful letter of instructions. "The object of your mission," said Jefferson, in this letter, "is to explore the Missouri River, and such principal stream as, by its course and communication with the waters of the Pacific Ocean, whether the Columbia, Oregon, Colorado, or any other river, may offer the most direct and practicable water communication across the continent for the purposes of commerce." How scanty was the knowledge of the interior of the continent extant at the time is shown by Jefferson's reference to the Columbia and Oregon as separate streams instead of different names for the same river. The letter went on to instruct Captain Lewis to inform himself, while following up the Missouri, as to the streams heading opposite its sources. He was also to learn what he could about the most northern source of the Mississippi, and its position in relation to the Lake of the Woods—knowledge, by the way, which he was not at all likely to obtain, inasmuch as the route he was to pursue did not at any point bring him within five hundred miles of the head-waters of the Mississippi. He was to observe the soil, the face of the country, the growth of vegetable productions, the animals, minerals, climate, the Indian tribes, their language, traditions, occupations, food, laws, and articles of commerce. As a precaution against the loss of the records of the expedition, he was directed, in case he reached the Pacific, to send two trusty people back by sea with copies of his notes. In case a return by land seemed imminently dangerous, he was authorized to come home with the whole party by either Cape Horn or the Cape of Good Hope. He was specially cautioned to cultivate friendly relations with the Indian tribes; and was furnished with passports from the French, Spanish and English Ministers, for use in case he entered the territories of their respective sovereigns.

At the time these instructions were made out the Mississippi River was the western boundary of the United States. The territory beyond was owned by France and was called by the general name of Louisiana. Spain had a rival claim, however, to the country above the Arkansas River, and maintained military posts at St. Louis and St.

Geneviève. Negotiations were in progress at Paris for the abolishment of the Spanish claim and the cession of the French Trans-Mississippi territory to the United States, and on July 1st, 1803, ten days after the letter of instructions was signed by the President, news came that the territory had actually been transferred April 30th. Captain Lewis was thus able to carry to the Indian tribes in the far interior the tidings that their "Great Father" would thenceforth be the President of the United States instead of the King of France. He left Washington July 5th, and arrived at Cahokia, near St. Louis, too late to organize his party and start up the Missouri that season.

On the 14th of May, 1804, the expedition left camp in a keel boat having a cabin, and two open canoes. The party consisted, besides the two captains, of nine young men from Kentucky, fourteen United States soldiers, two French watermen, an interpreter and hunter and a black servant. In addition, a corporal and six soldiers were engaged to go as far as the Mandan towns and assist in carrying stores and repelling attacks. Two horses were led along the river bank for use in hunting. Early in November the expedition went into winter quarters on the eastern bank of the Missouri at a point about fifty miles above the present town of Bismarck. The journey was resumed April 7th, 1805, and the mouth of the Yellowstone was passed April 26th. Arriving early in June at the mouth of the Marias River, the two chiefs were in great doubt as to whether that stream or the one it joined was the true Missouri. The party went up the Marias for a short distance and then returned to its mouth, while Captain Lewis made a reconnaissance up the Missouri and solved the troublesome problem by discovering on June 12th the Falls of the Missouri, which he knew from Indian information were upon the main river.

The boats were left below the falls and light canoes constructed above. Proceeding on their way with fresh courage, the party passed the Gate of the Mountains on the 19th, and were profoundly impressed with the grandeur of the rocky walls towering above the river to the height of twelve hundred feet.

Going on by land in advance of the expedition, who were rowing and poling the canoes up the crooked river, Captain Clarke reached the Forks of the Missouri on the 25th. When the main body came up a question arose as to which of the three streams was the real Missouri and entitled to the name. It was difficult to determine which was the largest, and so it was decided to give them all new names. The western fork was called Jefferson River, in honor, as Lewis wrote in his journal, "of the President of the United States and the projector of the enterprise;" to the middle fork was given the name of Madison River, as a compliment to James Madison, then Secretary of State, and to the eastern fork that of Gallatin River, in honor of Albert Gallatin, then Secretary of the Treasury. It is to be regretted that the name of the Missouri was not continued above the forks and applied to the Jefferson, which, as the longest of the three streams, ought properly to be regarded as the main river, the other two being tributaries only.

The expedition followed up the course of the Jefferson as far as the canoes could be pushed. Captain Lewis going on in advance crossed the divide on August 13th, and came to a little stream whose waters he conjectured ran to the Pacific Ocean. He was confirmed in his belief when an Indian invited him into his bower and gave him a small morsel of boiled antelope and a piece of fresh roasted salmon. This was the first salmon he had seen, and satisfied him that he was on waters flowing to the Pacific. He had in fact reached one of the little mountain brooks running into the Salmon River in the present Territory of Idaho. He returned to the boats, and the expedition halted while Captain Clarke went ahead to learn from the Shoshone Indians whether the river whose head-waters Lewis had discovered afforded a practicable route to the sea. He traveled three days, reached the main stream and followed it for a day's journey, only to become satisfied that it would not be safe for the canoes, owing to the numerous rapids, hemmed in by precipitous mountain walls, where there was no portage for the canoes, and that a land passage across sandy deserts and rocky wastes would be too hazardous to undertake. He named the stream the Lewis River.

The expedition turned northward on Captain Clarke's return. The canoes were left on the Jefferson, a "cache" made of a portion of the supplies, and with horses purchased from the Indians the party proceeded by land. Captain Clarke discovered the head-waters of the Deer Lodge River, which in its lower course now receives successively the names of Hell Gate River, Missoula River and Clarke's Fork of the Columbia. The Indians told him that this stream ran into the Columbia, but dissuaded him from attempting to descend it with the expedition, saying that they had never known any one to go down it, and that when they visited their friends on the Columbia they went directly west across the mountains. So it was determined to push on over the Bitter Root Range of the Rocky Mountains. On September 1st the party reached the head-waters of Fish Creek, and were over the divide; but their provisions were exhausted and no game could be found. They were forced to live for several days on horseflesh. The hospitable Nez Perces relieved their wants and helped them to construct canoes on the upper waters of the Kooskookie River, now the Clearwater. They left their horses with the Indians, who promised to take care of them until their return, launched their boats on October 7th, and the next day reached the junction of the Clearwater with the Shoshone, or Snake, at the site of the present town of Lewiston. Agreeing that the principal stream was the same as the one whose head-waters Captain Lewis had discovered, they named it in his honor. The name did not adhere to it. On the maps for fifty years after the expedition returned the southern branch of the Columbia was called the "Lewis Fork or Snake River," and the northern the "Clarke's Fork or Flathead River." Clarke's name is still retained for the stream whose sources he discovered, but Lewis' has been dropped from recent maps and the repulsive name Snake, which translates the Indian name Shoshone, is alone used.

It was smooth work now for the expedition all the way down to the mouth of the Columbia. The men trafficked with the Indians for provisions, and the canoes rapidly floated with the swift current. On October 17th they reached the Columbia, on the 22d they carried their boats around the Indian portage at the Dalles, on the 31st they passed the Cascades, on November 6th they camped at the mouth of Cowlitz River, and on the 7th came in sight of the ocean, the goal of their long journey. "The cheering view," wrote Captain Lewis, "exhilarated the spirits of all the party, who were still more delighted on hearing the distant roar of the breakers."

The latter part of November and the first week in December were spent in exploring the mouth of the Columbia and the adjacent ocean shores. On December 8th a site for a winter camp was selected about three miles from the Columbia on a small stream called the Notch. The winter was spent in hunting and in making a supply of moccasins and dressed skin garments to wear on the return trip. No ship visited the mouth of the river during their stay, but they got from the Indians the names of a number of trading vessels, English and American, which had called there during recent years. It was quite uncertain when another would come, or whether when one should arrive she would be bound for an American port. So it was thought best for the expedition to keep together and return by land, instead of a portion of it going home by sea, as President Jefferson had intended.

On the 23d of March, 1806, the return journey was begun. "The whole remaining stock of goods might almost have been tied in two handkerchiefs," wrote Lewis in his journal. "Our clothing had been replaced with dressed skins, and we had three or four hundred pairs of moccasins, but for trading we had only six blue robes, one scarlet one, a coat, and a hat of artillery pattern, five robes made of an old flag, and a few old clothes trimmed with riband." The problem of subsistence was thus a serious one. On the way out food had been readily procured from the Indians by bartering trinkets and clothing, and the same sort of exchange had secured horses for the mountain journey. Now there was almost nothing left to trade with. Fortunately a new resource was discovered. By the aid of some volatile liniment, a little eye water and a few other simple remedies, Captain Clarke established a reputation as a great medicine man, and his services were in request at every Indian village the expedition came to, liberal payment being always tendered in whatever kinds of provisions the country afforded.

On their way up the Columbia the mouth of the Willamette River was discovered. They had missed it when they came down, because of the islands which hid it. Captain Clarke ascended the Willamette for a day's journey, and was so much impressed with its magnitude that he thought it might water all the country south to the Gulf of California. He called it the Multnomah, the name the

Indians gave it. The 4th of May found the party again at the mouth of Snake River. They pushed on without adventure to the Clearwater and up to Camas Prairie (they called it Quamash Prairie); the same fertile spot, by the way, for which Chief Joseph and his Nez Perces fought a few years ago. The faithful Indians restored them their horses and guided them over the mountains. They passed the main divide on the 26th of May in a snow storm, and reached the Warm Springs, on Travelers' Rest Creek on the 29th.

It was then arranged that the expedition should divide, Captain Lewis with nine men going to the Falls of the Missouri and exploring the Marias River country, while Captain Clarke with the remainder of the force went up the Jefferson after the canoes and supplies left there. Afterward Clarke was to take ten men, cross to the Yellowstone, and descend that river, the others joining Lewis with the canoes at the Falls, and all meeting at the mouth of the Yellowstone. This plan was successfully carried out. Captain Lewis reached the falls July 16th, having on the way the only hostile adventure of the whole journey. He killed a Blackfoot Indian who was stealing his horses. For fifty years afterward the revengeful Blackfeet dated their hostility toward the whites from this occurrence. On August 12th the two parties met on the Missouri, below the mouth of the Yellowstone.

Captain Clarke's party ascended the Deer Lodge, which they called Clarke's River, crossed the Deer Lodge Pass, and on July 8th found their canoes and their "cache" on the Jefferson. On the 13th they reached the Forks of the Missouri. A sergeant and nine men went on down the river with the canoes, while Captain Clarke with ten men and fifty horses started by land for the Yellowstone. Going up the Gallatin River they crossed the Belt Mountains from its east fork through what is now called Bozeman Pass, the route taken by the Northern Pacific Railroad, and nine miles from the top of the ridge reached the Yellowstone. Passing Shields' River, which they named for one of their men, they camped at the mouth of Big Timber Creek to build canoes. The Crow Indians, as thievishly disposed then as since, stole twenty-four of their horses, and wolves and dogs made off with their dried meat. On July 24th they embarked and came the same day to the mouth of Clarke's Fork of the Yellowstone, which they named. Pryor's River was named for a sergeant of the party. The names were perpetuated in these instances, but in many cases besides that of the Lewis River the appellations bestowed on the streams by the expedition have passed into forgetfulness. The river now called the Palouse, which is the main northern tributary of Snake River, was called by them Drewyer's River as a compliment to a brave and active sergeant of the party, and many of the names on the map Lewis and Clarke made on their return will be vainly sought for on maps made in recent years.

The party camped on the 25th at the foot of the picturesque butte which bears the name they gave it of Pompey's Pillar, and Captain Clarke carved his name on the steep rocky face fronting the river, where it is plainly legible to this day. The mouth of the Big Horn was passed on the 26th, Tongue River on the 28th, Buffalo Shoal on the 30th, and on September 3d the party arrived at the Missouri. On the way down the Yellowstone great herds of elk were seen and immense droves of buffalo. At one time the canoes were detained for two hours waiting for a buffalo army to ford the river. The number of animals in this enormous moving mass could not be computed. Bears were frequently seen, and wolves abounded. Sergeant Pryor, who traveled by land with two companions and the horses of the party, overtook Clarke at the mouth of the river. The Indians had stolen all the horses, and the men had made boats of twigs and raw hide and safely descended the stream.

The mosquitoes were so troublesome at the mouth of the Yellowstone, that Captain Clarke left a letter on a pole to apprise Captain Lewis of his movements, and proceeded down the Missouri. On September 12th Lewis' boats overtook him, and the reunited expedition made the best time they could down the Missouri, eager to reach home with the tidings of their exploits and discoveries. They arrived at St. Louis September 23d, fired a salute, and went ashore. Speaking of their return, Jefferson, in his biographical sketch of Captain Lewis, says: "Never did a similar event create more joy in the United States. The humblest citizens had taken a lively interest in the issue of this journey, and looked forward with impatience to the information it would furnish." Rumors of the destruction of the expedition had been circulated, and nothing had been heard from it since it left the Mandan towns in April, 1805.

Captain Lewis was rewarded with the Governorship of Louisiana and later of the newly organized Territory of Missouri, created by Congress, and embracing the northern part of the Louisiana purchase, extending from the Mississippi River to the Pacific Ocean, and Captain Clarke was appointed General of the Militia and Agent for Indian Affairs Afterward, on the death of Lewis, Clarke became Governor of the Territory, and held the office seven years. Lewis came to a sad end. He was subject to attacks of hypochondria. His active life in the field, in command of the expedition, relieved him for the time from these fits of low spirits, which seemed to be constitutional, but they returned when he was confined to the office work of his governorship in St. Louis. In the fall of

1809 he started for Washington to transact some business with the government, designing to go also to Philadelphia and superintend the publication of the journals of the expedition. When he started he was under the influence of one of these attacks of melancholia. A friend named Neeley went with him. They were two days' journey beyond the Tennessee River, when the loss of two horses compelled Neeley to halt. Lewis went on to the first farm-house, and that night committed suicide. Clarke died September 1, 1838.

An imperfect account of the Lewis and Clarke Expedition was published in New York in 1806, and reprinted in London in 1809. A complete account prepared from the journals of the two leaders, and edited by Paul Allen, to which was prefixed the memoir by Jefferson, was published in Philadelphia in 1814, and in London the same year. Other editions appeared shortly afterward in London and Dublin. The book was reviewed by Robert Southey in the *London Quarterly*, and attracted great attention in Europe. The last American edition was published in New York in 1843.

CHAPTER IV.

FUR TRADERS, TRAPPERS AND MISSIONARIES.

The Hudson's Bay Company—The Northwest Fur Company—Annual Councils at the Grand Portage—The Mackinac Company—John Jacob Astor's Enterprise—Founding of Astoria—A Perilous March Across the Continent—Hudson's Bay Company Posts and Trails—Captain Bonneville's Expedition—Nathaniel J. Wyeth's Undertaking—The American Flag again Planted in Oregon—Bonneville's Two Journeys to the Columbia—Rev. Samuel Parker's Travels—His Zeal for Converting the Indians—His Prediction of a Pacific Railroad—Comments of the Knickerbocker Magazine.

THE great fur companies which flourished in the last century and the early part of the present, played an important part in the exploration of the Northwest. Oldest of these was the Hudson's Bay Company, formed in 1670, whose base of operations was Hudson's Bay. Its trading posts extended far up the rivers flowing into that vast body of water, and ultimately reached the Pacific coast. It was an organization of English merchants, who obtained from the British Crown seignniorial rights over the whole region north of the Canadas, and monopolized all trade with the Indians. Ships were sent out from London every year, which entered the bay during the brief season when it is free from ice, carrying cargoes of merchandise to the posts, and taking back the furs accumulated during the winter by barter with the natives.

In 1783 the merchants of Canada engaged in a similar trade along the great lakes and in the region now forming the Province of Manitoba, and organized the Northwest Fur Company, which in time became a powerful corporation and the rival of the Hudson's Bay Company.

The principal partners lived at Montreal or Quebec in something like baronial grandeur. There were junior partners and agents who lived at the Grand Portage, on Lake Superior, and at the posts on Lake Winnipeg, the Red River, the Saskatchewan, and other lakes and water courses. Once every year a conference was held at Fort William, near the Grand Portage, to which the partners from Canada came in great state, richly appareled, and with a retinue of cooks and servants, and an abundance of wines and delicacies. "Here," says Irving in his *Astoria*, "in an immense wooden building, was the great council-hall, as also the banqueting chamber, decorated with Indian arms and accoutrements, and the trophies of the fur trade. The house swarmed with traders and voyageurs, some from Montreal bound to the interior posts; some from the interior posts bound to Montreal. The councils were held in great state, for every member felt as if sitting in Parliament, and every retainer and dependent looked up to the assemblage with awe, as to the House of Lords. There was a vast deal of solemn deliberation and hard Scotch reasoning, with an occasional swell of pompous declamation.

"These grave and weighty councils were alternated by huge feasts and revels, like some of the old feasts described in Highland castles. The tables in the great banqueting room groaned under the weight of game of all kinds; of venison from the woods and fish from the lakes, with hunters' delicacies, such as buffaloes' tongues and beavers' tails, and various luxuries from Montreal, all served up by experienced cooks brought for the purpose. There was no stint of generous wine, for it was a hard drinking period, a time of loyal toasts and bacchanalian songs and brimming bumpers.

"While the chiefs thus reveled in hall, and made the rafters resound with bursts of loyalty and old Scotch songs, chanted in voices cracked and sharpened by the northern blast, their merriment was echoed and prolonged by a mongrel legion of retainers—Canadian voyageurs, half-breeds, Indian hunters, and vagabond hangers-on, who feasted sumptuously without on the crumbs that fell from the table and made the welkin ring with old French ditties, mingled with Indian yelps and yellings."

Pushing their posts steadily northward year by year, the Northwest Company invaded the domain claimed by the Hudson's Bay Company. A controversy arose between the two powerful organizations which lasted for ten years, and was characterized by many acts of violence and wrong. It was ended at last by the consolidation of the two corporations under the name of the older one in 1821.

For a long time the Northwest Company controlled the fur trade on the American side of the boundary west of Lake Superior, as well as on the British side; its influence extending as far west as the Red River of the North, and embracing most of the territory within the limits of the present State of Minnesota. Another Canadian Company, called the Mackinac Company, sent its canoes and pirogues by Green Bay, Fox River and the Missouri River to the Mississippi. Congress finally interfered in 1816 to put a stop to the operations of these foreign companies on American soil.

In 1807, John Jacob Astor, a German by birth, who came to New York in 1784 to engage in the fur trade, bought out the Mackinac Company and formed a new association, called the American Fur Company, which carried on the traffic in the Upper Mississippi country and on Lake Superior. Encouraged by the action of Congress shutting out foreigners from the trade, Mr. Astor organized the Pacific Fur Company in 1810, and dispatched two parties to establish a trading post at the mouth of the Columbia River, one going by sea and one by land. The sea expedition sailed from New York in the ship *Tonquin* on the 8th of September, 1810, and on the 22d of March, 1811, arrived safely at its destination and founded the town of Astoria. The land expedition encountered terrible hardships, and lost a number of its men on the march across the continent by death from famine and fatigue, or from accidents. Its leader was Wilson P. Hunt, of Trenton, N. J., one of the partners of the company, and associated with him were Donald McKenzie, another of the partners, Ramsay Crooks, John Day, a Virginia hunter, from whom the John Day River in Oregon got its name, and a number of other hardy pioneers, American and Canadian. The expedition was organized in Montreal in 1808, where a force of Canadian voyageurs was engaged. At Mackinac, reached by the usual canoe and portage route of the Ottawa River and Georgian Bay, the force was reorganized. It crossed from Green Bay to the Mississippi by the Fox and Wisconsin Rivers, and arrived at St. Louis on the 3d of September. Winter was too close at hand to make much progress that year, and the party, filling three boats, only made 450 miles on their way up the Missouri before going into winter quarters. When the voyage was resumed in the spring of 1809 the party numbered sixty persons. The intention was to follow closely the route of Lewis and Clarke, but when near the Big Bend of the Missouri, Mr. Hunt was dissuaded from keeping on up the river by news of the hostility of the Blackfeet Indians. So the expedition abandoned its boats, and buying horses of the Sioux Indians, set out overland. The Rocky Mountains were crossed near the sources of the Big Horn and Wind Rivers, and the head-waters of the Snake were reached in September. There the party found Mr. Henry, a trapper for the Missouri Fur Company, who had been driven from the Upper Missouri by the Blackfeet. Canoes were built and the party floated down the Snake for about five hundred miles, when they found the river so encumbered with rocks and rapids, and so hemmed in by precipices, that, after losing one canoe with its occupants, they determined to pursue their way on foot. Starvation soon threatened them, and they divided into three parties for better chance of finding subsistence by hunting or from bands of hospitable Indians. After intense suffering in the deserts west of Snake River, the survivors, including all the leaders of the expedition, reached the Columbia, and following its course arrived at Astoria. Hunt's expedition was the second body of white men to cross the continent between the Missouri and the Columbia. Its exploits and privations were worthily put into literature by Washington Irving in his *Astoria.* Mr. Astor's fur-trading enterprise on the Columbia ended disastrously. His partners betrayed it to the Northwest Company and sold its post at Astoria and another established on the Upper Columbia to that corporation. The war of 1812 began immediately afterward and British ships took possession of Astoria in 1814. The treaty of peace left the question of the ownership of Oregon unsettled, and threw the country open for ten years to the joint occupancy of the citizens and subjects of both the United States and Great Britain. Mr. Astor did not renew his efforts in that quarter, and the Columbia was added to the domain of the Northwest Company and held by it and its old rival and successor until American settlement finally forced a decision of the boundary question, and Captain Gray's log-book gave two future States to the Great Republic.

The hardy French voyageurs in the employ of the Northwest Company used to make regular trips across the continent, starting from Vancouver on the Columbia, the headquarters of the company on the Pacific coast, early in April, threading the rivers and lakes, portaging over the mountains and divides, and reaching Fort William on Lake Superior about the first of July. Returning, they would be back on the Lower Columbia by the end of October. With these courageous scouts and skirmishers of the army of commerce went the Jesuit missionaries, making their homes among the Indian tribes and setting up their altars in the forests and on the verdant prairies and by the shores of half-known lakes and rivers. The eastern limit of the region left open to the joint occupancy of British subjects and American citizens was not accurately defined, and the excellent organization of the Hudson's Bay Company enabled it practically to take possession of the whole country between the Pacific coast and the sources of the Missouri. From the headquarters of the company at Vancouver, on the Lower Columbia, parties were sent out to establish posts in the interior and to open stations among the Indians connected by trails, canoe routes and portages. One important post was maintained at Walla Walla, another at Fort Colville, another on the Spokane River, another on the Koutenai River. Log huts were built on the trails for the shelter of carriers and trappers. These roadside inns had no landlords. Every one was free to make use of their accommodations, which consisted only of four walls, a roof and a fire-place. In the meantime the American fur companies, whose headquarters were at St. Louis, had established posts on the Upper Missouri and on the Green River Valley, and carried on trapping and barter for furs on the Eastern shores of the RockyMountains.

The next notable overland expedition which passed over some portion of the route now traversed by the Northern Pacific Railroad, and aided to make known to the world the features of the Northwest, was that of Captain Bonneville, whose adventures were graphically described by Washington Irving. Bonneville was an officer in the United States army, who, in 1832, got leave of absence to organize a party of hunters and trappers and cross the continent to the Columbia River. The expedition had a commercial motive, being supported by a number of New York merchants, though the object of its leader was rather travel and adventure than profit. A force of 110 men was recruited, mostly experienced frontiersmen, and the party set off across the plains from Fort Osage, on the Missouri River, on May 1st. Traveling with wagons instead of with pack-horses, as all land expeditions which had gone as far as the Rocky Mountains had done, Bonneville followed the course of the Platte River, and reached the mountains late in July. Crossing the divide he felt some degree of exultation in the thought that his was the first party that had ever crossed north of the settled provinces of Mexico from the waters of the Atlantic to those of the Pacific in wagons. The expedition established a fortified camp in Green River Valley and sent out hunting parties. A detachment was sent back to the States with furs by the route of the Big Horn, Yellowstone and Missouri Rivers, in boats made by stretching buffalo hides over frames. With this party returned Nathaniel J. Wyeth, who had come out from St. Louis with Captain Sublette with supplies for the Green River post of the Rocky Mountain Fur Company. Wyeth was a Boston man of great enterprise and sagacity, who afterward returned to the mountains and made his way to the Columbia River. He was the first American after the failure of the Astoria experiment to attempt a commercial enterprise in Oregon, and to rear the American flag in that region. He established a trading post on Wappatoo Island, at the mouth of the Willamette River, then called the Wallamut. This he named Fort Williams, and intended it to be the headquarters for fur-trading operations in the interior and for salmon-catching on the river. Wyeth was the first man to appreciate the value of the salmon of the Columbia as an element of commerce. He designed to cure the fish and ship them east by sea with his cargoes of furs. His bold and patriotic enterprise came to grief from want of capital to carry it on, and he was forced to sell his goods and buildings to the Hudson's Bay Company.

Returning from this digression to Captain Bonneville, we find him, after exploring the Big Horn and Wind River Mountains and dispatching a detachment across the desert to the Mexican post of Monterey, setting off with a few men, in the spring of 1833, for the Columbia. He followed the Salmon River, a route once supposed to be the best for a line of railroad, and got safely to the Hudson Bay Company's post at Walla Walla after many perilous adventures. Offended at the want of hospitality of the officers at the post, he started back at once, and reached his camp on Green River before winter set in.

The Monterey expedition went out for wool and came back shorn. It reached its destination, but the men became so enamored with the dissipated life of the little Mexican town that they spent the proceeds of the sale of all the furs they had obtained in gambling and carousing, and returned the next season empty-handed and half-starved to Bonneville's headquarters. Captain Bonneville made a second journey to the Columbia in 1834, going by the Snake River route part of the way. Thence traversing the Grand Ronde and Wallowa Valleys, and crossing the Blue Mountains, he went down the Columbia as far as the mouth of the John Day River.

Disappointed in his hopes of opening trade with the Indians, who were under the influence of the Hudson's Bay Company, and refused supplies at the Walla Walla post, Captain Bonneville had to turn back to the mountains, where game abounded, to avoid starvation. He returned to the States in 1835, and resumed his military duties. A town on the Columbia, at the foot of the Cascades, bears his name.

Cotemporary with Bonneville and Wyeth as explorers of the Northwest was the Rev. Samuel Parker, a Presbyterian clergyman, who was sent out by a Presbyterian Church in Ithaca, New York, to cross the continent to Oregon, and report a plan for Christianizing the Indians of the interior and the Pacific coast.

Mr. Parker, after graduating at Williams College, became one of the best known of the home missionaries in Western New York, doing itinerant work in that region. Suspending his work to study with the first class that left Andover Seminary, he returned to his mission field, and was pastor at Danby, N. Y., from 1812 to 1826. While there he married a niece of Noah Webster, the lexicographer, her father being a Lord, of the Lyme (Conn.) stock; and it was her intelligence and strong character that seconded his resolute enterprise. His permanent home afterward was in Ithaca.

It was in 1833, while preaching in Middlefield, Mass., that he read an account of the four Flathead Indians who, the year before, came to St. Louis to inquire about the white man's God and Bible,—one of the most remarkable pilgrimages on record. Two of the four died in that city. The other two, in their farewell speech at the American Fur Company's quarters, expressed their great disappointment that they had only been entertained by gifts, shows, and religious ceremonies, and had not found the Light and Book of which they were in quest—a speech afterward repeated by the one survivor to the Oregon missionaries. That speech, overheard by a clerk of the Fur Company, was described by him in a letter to friends, and so found its way into print.

Mr. Parker read the story, and was fired with a desire to carry his religion to these inquiring red men beyond the great mountains of the West, although he had reached the age of fifty-four. In 1833 he offered his services for this purpose to the great missionary society of his denomination, but met with no encouragement. Meanwhile he removed to Ithaca, and repeatedly urged his offer to the same society, with no result. The First Presbyterian Church of Ithaca, however, listened to his appeal, and resolved to undertake the whole expense. He secured two helpers, prepared his outfit, and, under the auspices of the American Board of Foreign Missions and with a circular letter from the United States Secretary of War, set forth, after a solemn farewell meeting at the church.

By some misinformation, he was too late at St. Louis for that year's Fur Company caravan, which, apparently unknown to him, was accompanied by a Methodist mission under the Rev. Jason Lee—a mission that afterward did excellent work in helping on the Christian civilization planted around it in the fertile Willamette Valley, whither immigration in after years was directed by the politic Hudson's Bay Company. Nothing daunted, Mr. Parker placed his two companions as teachers among the Pawnees, returned home, enlisted Dr. Marcus Whitman, found a missionary wife for the doctor, and set out again, March 14th, 1835.

He joined the expedition of the American Fur Company, which left Liberty, Mo., in May, 1835, under charge of Captain Fontanelle, to take supplies to the trading posts in the Rocky Mountains. The caravan proceeded by way of the Black Hills to the fort on Green River, which was a rendezvous for two or three hundred hunters and trappers employed by the company. There Dr. Whitman turned back, Mr. Parker going on for five days further to the Salmon River with a party of hunters under Captain Bridger. The rest of the journey to Walla Walla he made with no other companions than the kind and faithful Nez Perces Indians inhabiting the country, and with no peril save from wandering war parties of the always hostile Blackfeet. From Walla Walla, Mr. Parker explored the Palouse country and the Spokane country, and visited Fort Colville on the Upper Columbia, and then, descending the river to Astoria, returned to the Atlantic coast by sea. He wrote a book of travels, giving very faithful descriptions of the country he saw, and interesting accounts of the manners and customs of the Indian tribes, which had a large sale, and was republished in London. The courage, zeal, and intelligence displayed by this enterprising missionary deservedly placed him high on the roll of famous American travelers. One sentence in his book calls for special mention here. He wrote in his journal, after he had crossed the Rocky Mountains: "There would be no difficulty in the way of constructing a railroad from the Atlantic to the Pacific Ocean. There is no greater difficulty in the whole distance than has already been overcome in passing the Green Mountains between Boston and Albany; and probably the time may not be far distant when tours will be made across the continent, as they have been made to the Niagara Falls, to see Nature's wonders." Here, then, was the first prophet of the Pacific Railway. Mr. Parker died in Ithaca, N. Y., in 1866, at the age of eighty-seven.

In a review of Mr. Parker's exploring tour in the *Knickerbocker Magazine*, June, 1838, Willis Gaylord Clark thus eloquently described the great transformation in the far West, which, sooner than any one then anticipated, has come to pass: "The work will yet be accomplished! Let the prediction be marked. This great chain of communication will yet be made, with links of iron. The treasures of the earth in that wide region are not destined to be lost. The mountains of coal, the vast meadow seas, the fields of salt, the mighty forests, with their trees two hundred and fifty feet in height, the stores of magnesia, the crystallized lakes of valuable salts — these were not formed to be unemployed and wasted. The reader is now living who will make a railroad trip across this vast continent. The granite mountain will melt before the hand of enterprise; valleys will be raised, and the unwearying fire-steed will spout his hot, white breath where silence has reigned since the morning hymn of young creation was pealed over mountain, flood and field. The mammoth's bone and the bison's horn, buried for centuries, and long since turned to stone, will be bared to the day by the laborers of the 'Atlantic and Pacific Railroad Company'; rocks which stand now as on the night when Noah's deluge first dried will heave beneath the action of 'villanous saltpetre'; and where the prairie stretches away, 'like the round ocean, girdled with the sky,' with its wood-fringed streams, its flower-enameled turf, and its herds of startled buffaloes, will sweep the long hissing train of cars, crowded with passengers for the Pacific seaboard. The very realms of chaos and old night will be invaded; while in the place of the roar of wild beasts, or howl of wilder Indians, will be heard the lowing of herds, the bleating of flocks; the plough will cleave the sods of many a rich valley and fruitful hill, while 'from many a dark bosom shall go up the pure prayer to the Great Spirit.'"

CHAPTER V.

MARCUS WHITMAN'S HEROIC RIDE.

Dr. Whitman and Rev. H. H. Spalding go to Oregon with their Wives—Schemes of the Hudson's Bay Company to Secure Oregon for Great Britain—Whitman's Daring Resolution—He Starts with A. L. Lovejoy for Washington—Perilous Winter Journey across the Mountains and Plains—Whitman's Appearance at the State Department—Oregon Saved to the United States—Whitman Leads the Missouri Emigration—His Tragic Death.

DR. MARCUS WHITMAN, who, as we have seen, left Mr. Parker in the Rocky Mountains to return East, had no intention of giving up the missionary work in Oregon to which he had pledged himself. In 1836 he again started for the Pacific coast, taking with him his bride, a daughter of Judge Prentiss, of Plattsburg, N. Y., and also the Rev. H. H. Spalding and wife, and W. H. Gray, who subsequently wrote a valuable history of Oregon. The two ladies were the first American women to make the overland journey to the Pacific coast. They endured the fatigues and privations of 3,500 miles of travel, mostly made on horseback, with a courage and fortitude not surpassed by any of the men in the party. The little expedition joined the annual fur trading caravan which left the Missouri River and went as far as Fort Hall, in what is now Southeastern Idaho, then the extreme western post of the American Fur Company. From that point Dr. Whitman and his companions, resisting the advice of everybody at the fort, started on with a wagon and got safely through to the Columbia Valley. This achievement was of the greatest importance in its effect on the subsequent emigration to Oregon, proving, as it did, that it was feasible to take families with wagons and household goods through to that remote region, which had previously been supposed to be worthless and inaccessible, except to the hunters and trappers of the Hudson's Bay Company.

In 1838 more missionaries of the American Board arrived in Oregon, and there were now three stations—Dr. Whitman's, twenty-five miles east of Fort Walla Walla; Mr. Spalding's, on the Clearwater, now in Northern Idaho; Messrs. Eells and Walker's, in Northeastern Oregon, now Washington Territory, near the Spokane River—and the following year a fourth station, in the Nez Perces country, in which year the first printing-press beyond the mountains was set up, at the Spalding Mission, and books in the Indian languages printed. In 1840 there were in all nineteen clerical and thirteen lay missionaries from the United States, and as many more American settlers with their families.

The control of the whole Oregon country was, at this time, practically in the hands of the Hudson's Bay Company, who occupied it with their trading posts under the treaty with Great Britain, which left its ownership open as a matter for future determination. The agents of the Hudson's Bay Company, naturally desirous of retaining their hold upon the region, were exceedingly jealous of the American missionaries, fearing that their arrival would soon be followed by an extensive emigration from the States, which would put an end to their plan of securing for Great Britain the possession of the whole of the Pacific northwest. To carry out this plan, Governor Simpson, the chief executive officer of the Company, made arrangements in 1842 for the transfer of some forty families of English, Scotch, and Canadian half-breeds from the Red River, or Selkirk, settlement, in what is now Manitoba, to the Puget Sound district. This large party of emigrants started across the northern plains in the spring of 1842, guided and protected by the Company. They reached their destination, but many of them refused to remain in the Puget Sound region and made their way to the Willamette and Tualatin districts. Shortly afterward the Hudson's Bay Company began fortifying Fort Vancouver, and a British war ship was stationed in the Columbia River.

These measures caused great anxiety among the few American settlers, who had no thought when they made the perilous journey to the Pacific coast that they were putting themselves in the way of becoming subjects of Great Britain. Apparently their own government had forgotten them and was ready to yield to the pressure of diplomacy at Washington and turn their country over to the permanent rule of the English crown. The heart of Dr. Marcus Whitman was greatly moved by this condition of affairs, and he determined to go to Washington and present the claims of the Oregon settlers to the President and Secretary of State. Winter was close at hand, and the chances were all against his safely getting across the snow-covered mountains and frozen plains of the vast interior, but he did not hesitate. He communicated his project to one friend, A. L. Lovejoy, who, with a devotion equal to his own, offered to be his companion. These two men left the missionary station of Wailatpu, on October 3, 1842, with no supplies save what they could carry on their saddles. After leaving Fort Hall they met with terribly severe weather, and snow greatly retarded their progress; often they were obliged to take shelter for days in deep ravines on account of the blinding fury of the storm. They bore off to the south in order to cross the mountains in a milder climate, and reached Grand River, which was frozen on either side about one-third across. They forced their horses into the icy current and safely reached the other shore. After thirty days' traveling they arrived at Taos, New Mexico, having subsisted mainly on the flesh of such animals as they could kill. Resting at Taos a few days and changing their jaded horses they set off for Bent's Fort, on the headwaters of the Arkansas, where they arrived on January 3, 1843. Mr. Lovejoy remained at the fort and Dr. Whitman pushed on to Washington by way of St. Louis, taking care to spread the news through the frontier settlements of Missouri that Oregon was in danger of being wrested from the American Union, and that he would return the next spring to lead a party of emigrants across the plains for its rescue.

A few weeks later an awkward, tall, spare-visaged, weather-beaten man, dressed in a blanket coat and buckskin trousers, which showed by many scorched spots that the wearer had been compelled to lie down close by camp fires to keep himself from freezing to death, walked into the State Department in Washington. This man was Dr. Whitman, the hero of the winter ride across the continent. His hands and ears were frost-bitten, and he had escaped death by what seemed to his pious mind a special interposition of Providence. He had reached his goal, however, and Oregon was saved to the American Republic. The representations of a man of such courage and self-sacrificing patriotism made a profound impression on the minds of President Tyler and Daniel Webster, his Secretary of State. The government changed its attitude in the negotiations relating to the Pacific coast, and the treaty soon afterward made with Great Britain confirmed to the United States all the territory now embraced in the State of Oregon and the future State of Washington. The following spring Dr. Whitman left Independence, Mo., on his return to Oregon, accompanied by a large emigrant train of adventurous frontiers-men and their families, protected by a military escort furnished by the government. They traveled in wagons and arrived without serious mishap in the Willamette Valley.

This true hero, whose exploits, had they occurred in a less prosaic age, would have been the theme of song and story, met with a tragic fate. He was murdered in 1847 by the very Indians to whom he had faithfully ministered as a physician and a Christian teacher, instigated, it was alleged at the time, by the hostility of the Jesuits toward all Protestant missionaries. A monument of Whitman and a county, town and college named after him show the appreciation in which his memory is held by the people of the Columbia Valley. He was born at Rushville, N. Y., in 1810 and was practicing medicine at Wheeler in that State when enlisted as a missionary by Samuel Parker.

CHAPTER VI.

THE FIRST PACIFIC RAILROAD ADVOCATE.

Early Arguments in Favor of a Railroad to the Pacific Coast—Dr. Samuel Bancroft Barlow's Newspaper Articles—A Scheme for a Railroad from New York to the Mouth of the Columbia—Estimated Cost—The Government Urged to Undertake the Work—Effect on East India Trade.

IT would be impossible to ascertain who was the first person to suggest the practicability or desirability of a railroad to the Pacific coast. No doubt the idea occurred to many thoughtful people about the time of the building of the first railroads in the Atlantic coast States. There was great enthusiasm then over the success of the new mode of transportation, and it would only be natural for the sanguine and enterprising to predict that the day would come, sooner or later, when the two shores of the continent would be joined by the iron rail. No special credit for foresight would attach to such a prediction, but credit is certainly due to the man who first publicly advocated a Pacific railroad as a scheme which should be immediately carried out, and carefully estimated the cost and advantages. That man is believed to have been Dr. Samuel Bancroft Barlow, a practicing physician living in Granville, Mass., father of S. L. M. Barlow, now an eminent New York lawyer. Dr. Barlow began as early as 1834 to write articles for the newspapers in favor of the general government undertaking the construction of a railroad from New York city to the mouth of the Columbia River. He kept up his active interest in the subject, and his newspaper contributions were continued for many years. He died in 1876. Among his papers was found, after his death, an article published in the *Intelligencer*, a weekly journal printed in Westfield, Mass. The exact date of its appearance cannot be ascertained, but the reference it contains to Michigan as a Territory, shows that it was written prior to 1837, the year when that State was admitted to the Union, and the statement that "two or three years more will suffice to extinguish the public debt," fixes its date as before 1835, when the Federal debt was wholly paid. Evidently the article was written as early as 1834, and perhaps in 1833, and the articles in a Michigan paper to which it refers are supposed to have been called out by others previously written by him. The article in question is as follows:

"*For the Intelligencer.*

"MR. EDITOR:

"An able writer in the *Emigrant*, a paper published in Washtenaw Co., Michigan Territory, in a series of numbers, of which it has fallen to my lot to see only the first, is endeavoring to draw the attention of the public to the scheme of uniting the City of New York and the mouth of the Columbia (Oregon) River, on the Pacific Ocean in about 46 degrees N. Lat., by a railroad, and also endeavoring by facts and arguments to prove the utility and practicability of the project.

"The writer assumes that the length of the road would be about 3,000 miles, which would be near the truth; the average cost of the road $10,000 per mile, which I believe would be more than the average cost for constructing it through such parts of the country as are fully settled; but when we come to the limits of settlement at the West, and go on to push forward such a work beyond the limits (I would say the extreme limits), of settlement it is to be presumed, indeed it is certain, the construction of a good railroad cannot be accomplished for $10,000 per mile. Three thousand miles at an average cost of $10,000 per mile gives as a total cost thirty millions of dollars ($30,000,000), a sum by no means inconsiderable, but yet a sum which the United States can pay in six years or even in three years without ever feeling it. Indeed, were the expense the only obstacle in the way of its accomplishment, and were the United States to engage in it, three years' time would be amply sufficient, if not to perform the whole work, yet to pay the whole thirty millions of money.

"If I am not mistaken, our government (thanks to the wisdom which guides it) pays on an average, of the public debt (National debt) twelve or thirteen millions of dollars annually, and it is calculated that two or three years will suffice to extinguish that debt.

"Now, Mr. Editor, I have a method to propose by which this work can be accomplished by our general government at the expense of the Union, and that, too, by a way in which the people of a widely extended, rich, prosperous and happy country would never feel one cent the poorer. It is simply this: Let preliminary measures be taken for three years to come, such as making examinations, surveys, levels, estimates, &c., &c., at the end of which time, the public debt being paid, the National Treasury overflowing (I would premise also that the present duties and taxes, indeed every source of revenue, be continued at their present rates) then let the work proceed with all possible and prudent speed and vigor, to a speedy and perfect completion, and let six, eight, ten, twelve or fifteen millions of dollars of the public money be appropriated to defray the expense annually until it is finished. What a glorious undertaking for the United States! The greatest public work, I mean the greatest in its ends and utilities that mortal man has ever yet accomplished; a work in its extent, and in the difficulty of accomplishment, only to be measured by the enterprise of Americans and by their ability to perform it.

"There is not the least doubt, sir, of the entire practicability of the undertaking, nor is there in our whole country, sir, a well-informed man who will not at once, on a fair examination of the plan and of the stupendous results and benefits which would flow to our country, to our whole country, from the operation of the road when completed, concede that the road, in the effects it will produce, in the beneficial results which it will procure to our commercial and manufacturing interests, and in fine, to every one of the great enriching interests of the country, will ultimately a thousand times pay for itself and be a source of almost countless revenue to the country.

"To state but two or three particulars: At the very moderate rate of ten miles an hour, a man would go from New York to the Columbia River in twelve days and a half; consequently he might go there, transact business, visit friends, examine the country and be in New York again in one month. Time and space would seem to be annihilated. It would be the great thoroughfare for emigration and the transportation of merchandise of every description. The ports of New York on the Atlantic and of Astoria on the Pacific would seem to be brought together as neighbors: the rates of transportation would be low and yet profitable; the settlement of the great West would proceed with unwonted pace; the East and the West and finally every section of the country would be bound together by stronger ties of common interest; the rich furs and other noble products of the North and West would find a ready passage to the consumers in the Atlantic States, while the products of Eastern manufacture would find an equally ready way to their ever welcome destination at the cabins of our brethren of the West. Again, it would change almost at once the mode of East India voyages. The ports and Islands of the East Indies would lie almost at our doors. Our merchants then, instead of tedious and unhealthy voyages to the Indies by the way of the Cape of Good Hope and St. Helena, in a latitude where disease and tempest alike conspire to render a voyage anything but safe or desirable, would make that voyage by the way of the Rocky Mountains and the mouth of the Oregon. From the mouth of the Oregon to the trading ports of the East Indies would be, as I suppose, from five to seven thousand miles, and that, too, a good part of the way in a latitude where the weather would be temperate, the air healthful and not surcharged with the elements of disease and death.

"The general course of the road from New York would be to the south shore of Lake Erie, and along the south shore of that lake. This project, visionary, chimerical, yea more than Quixotic, as it may now seem, will be accomplished, so sure as our nation goes on in the march of greatness and improvement for some few years to come, as it has done for twenty years past. It will be accomplished, for the wants and exigencies of the country will require it and most imperiously demand it. Since the completion of the Erie Canal, Americans seem to think, examine and judge for themselves what their wants are in the matter of canals and railroads, and to know that their wants can be supplied.

"My feeble pen would fail me to expatiate on the substantial time-enduring glory which would redound to our nation, should it engage in this stupendous undertaking. The work itself would be a monument of a country's greatness, both in design and in execution—a monument not like the mighty Pyramids—useless; but a monument whose usefulness would be attested in the innumerable blessings, and the more than countless riches which it would pour upon our happy Republic. The work will be done, and should you, sir, and I live to the good age of sixty years, we shall live to see it accomplished, and to see a faint prospect of the riches and the glory which it will ultimately confer on a great and magnanimous people. Happy shall be he whose lot it may be to live in the time of the completion of this grand scheme, and thrice happy he whose good destiny it shall be to preside over this great nation, and under whose auspices a work of such mighty moment shall be begun and carried to its completion."

Thus it appears that while Samuel Parker, the daring missionary, was writing in the heart of the Rocky Mountains that there would be no difficulty in the way of constructing a railroad from the Atlantic to the Pacific Ocean, and actually predicting the opening of such a line, Dr. Barlow in his retired home in a Massachusetts village was writing articles in the newspapers urging Congress to undertake the immediate building of the road. Perhaps there were earlier advocates of a Pacific Railway than Dr. Barlow, but, if so, the author of this volume has not been able to identify them, and therefore accords to him the first place. It will be observed that the northern route was the only one contempleted by Barlow. The valley route by way of the Missouri and Columbia rivers seemed to him, as to the writers on the subject who followed him, the route marked out by nature.

CHAPTER VII.

ASA WHITNEY'S PROJECT.

Whitney's Early Career—He Ascends the Missouri—Study of a Short Route to China—His Scheme for a Railroad from Lake Michigan to the Mouth of the Columbia—Efforts in Washington—Favorable Resolutions Secured from State Legislatures—Whitney Mobbed in New York—A Friendly Reception in Philadelphia—Whitney's Bill Defeated—Another Unsuccessful Effort in 1849—Whitney Dies Poor—The Chicago and St. Louis Conventions of 1849—George Wilkes' project—Plans of J. Loughborough and Dr. Hartwell Carver.

ASA WHITNEY has generally been regarded as the first projector of a railway to the Pacific coast. He was, in fact, the first man to put the idea into practical shape, and to urge it upon the attention of Congress. We have seen, in the previous chapter, that Dr. Barlow discussed the question in the newspapers as early as 1834. Whitney did not begin his movement until about ten years later. Possibly he had never heard of the village physician of Western Massachusetts and his articles in the newspapers, but it is more than probable that a great idea so intelligently presented and so assiduously advocated as was that of a government railroad to the mouth of the Columbia by Dr. Barlow, did not die out in the period of active railway construction in the Atlantic States which followed his first publications, and that Whitney had seen the project spoken of in print before he undertook its championship. At all events, he used substantially the same arguments that had been employed by Barlow.

Whitney returned to New York in 1844 from China, where he had lived a number of years. He was familiar with the conditions of the China and East India trade, and carefully calculating the distances from Liverpool to the points where that trade centered, found that a route across the United States by rail, and by sea from Puget Sound, would be considerably shorter than the all-sea route around the Cape of Good Hope. In 1845, with a company of young gentlemen from different States, he ascended the Missouri River for 1,500 miles. Returning, he appeared in Washington, in December, with a magnificent scheme for a railroad from Lake Michigan to the Pacific coast, to be built by him with the proceeds of a grant of lands for thirty miles on each side of the track. He got little for his pains, at first, but ridicule; but he was not a man to be put down by sneers and laughter. He believed thoroughly in his project, and soon made others believe in it. A great talker in public and private, eloquent, earnest, and well equipped with convincing statistics and forcible arguments, he returned to the charge in 1846, and in 1847 got a favorable report from the Senate Committee on Public Lands.

About this time Whitney began to work upon public sentiment through the means of meetings, and also labored to obtain resolutions of indorsement from State Legislatures. He traversed the whole country from Maine to the Mississippi, talking to Legislatures, Boards of Trade, and mass meetings, and rarely failing to get the commendation he sought. He wanted no money and no stock subscriptions. If Congress would give him the land he would build the road. The object of his journeys and speeches was to organize and bring to bear a pressure of public opinion upon Congress. In this he was remarkably successful. In 1847 and 1848 he obtained favorable resolutions from one or both branches of the Legislatures of Maine, New Hampshire, Vermont, Rhode Island, Connecticut, New York, New Jersey, Maryland, Ohio, Indiana, Illinois, Michigan, Tennessee, Alabama, and Georgia, and also from public meetings addressed by him in Philadelphia, Pittsburg, Cincinnati, Indianapolis, St. Louis, Louisville, and many other cities. The only place where he was unsuccessful was New York. He addressed a large meeting in the Tabernacle on January 4th, 1847, or rather he tried to address it. The Mayor presided. The vice-presidents named in the newspaper account published next day were Mr. Tileston, a rich merchant and shipowner; Mr. Spofford, his partner; C. King, J. P. Phoenix, a prominent lawyer, and Prosper M. Wetmore, a leading politician. The *Courier and Enquirer*, then the chief newspaper of the city, began its report of the affair as follows: "The public meeting advertised to be held in the Tabernacle last evening, for the purpose of considering of the expediency of commending to the consideration of Congress the projected railroad to the Pacific, was turned into a bear garden tumult by a packed party of Agrarians, National Reformers, Fourierites, etc., who seem to think the public lands of the United States have no other legitimate use or purpose than to be distributed without money or price among the landless of the Universe, who may come here to clutch a portion of the plunder."

Whitney had hardly begun speaking when he was interrupted with calls for Shepherd, a young lawyer then popular with the turbulent classes. Ryckman, a candidate of the National Reformers for some city office, mounted the platform and began a harangue denouncing Whitney's project, and claiming the public lands as the property of the people, not to be given over to any set of speculators. There was a great uproar in the audience, and the Mayor and the vice-presidents prudently seized their hats and overcoats, and escaped by a back door, Mr. Whitney presumably following close after. The mob had the hall to themselves for a time, until at last the gas was turned off, amid the shoutings of an Irish agrarian orator named Comerford.

Whitney met with a very different reception in Philadelphia. In 1846 he gained for his project in that city the cordial interest of William D. Kelley, now the senior member of the national House of Representatives in length of service, then a rising young orator. What followed is best told in Judge Kelley's own language:

"The grandeur of the subject inspired me, and my enthusiasm for his great project induced Mr. Whitney, despite the disparity in our years, to favor me with frequent conferences, and to bring to my attention whatever information relating to the subject he obtained. Early in the year 1846, I felt justified, by the growth of sentiment in its favor, in undertaking to secure him an opportunity to present his project to a public meeting of the citizens of Philadelphia. To induce a sufficient number of citizens to act as officers of the meeting was the work of time. I found but few who took an interest in the subject, or believed in the feasibility of the project. Some said that a railroad so far north would not be available for as many months in the year as the Pennsylvania canals were; that it would be buried in snow more than half the year. Others cried, 'What madness to talk of a railroad more than 2,000 miles long through that wilderness, when it was impossible to build one over the Alleghanies!'

"As I went from man to man, with invaluable collections of facts and figures Mr. Whitney had gathered, I found that the doubts with which the work must contend were infinite in number; and it was not until six months had elapsed that a sufficient number of well-known citizens to constitute the officers of the meeting had consented to sign the call for a meeting, and to act as such. Yet the cause had gained adherents, and, as I find by reference to the papers of that day, the meeting for which I had so long labored was held in the Chinese

Museum on the evening of December 23d, 1846. His Honor, John Swift, then Mayor of the city, acted as president; Colonel James Page, Hons. Richard Vaux, William M. Meredith, and John F. Belsterling, together with Mr. David S. Brown and Mr. Charles B. Trego, acted as vice-presidents; and Senator William A. Crabb, and William D. Kelley, acted as secretaries. The speakers at the meeting were Messrs. Whitney, Josiah Randall, Peter A. Browne, and William D. Kelley.

"Mr. Whitney stated, with great clearness, his project, and the advantages that would result from it. It was, he said, to be a railroad from Lake Michigan to Oregon. He believed that it could be constructed on a line about 2,400 miles in length, and he and his associates hoped to be able to build it in twenty years if the government would grant sixty miles breadth of land for the whole distance. In answer to the question how he could make land in that remote wilderness available for building a road, he dwelt upon the contrast between the climate of that country and that with which dwellers east of the Mississippi were familiar, and asserted fearlessly that a railroad through that section would be less disturbed by snow than one through Central New York or Pennsylvania, and proceeded to disclose his plan, which involved a large annual emigration from Europe and the cities of the Eastern States. His plan was to employ these emigrants in the construction of the road, and to pay them in part in land, and to detail a sufficient number to prepare small portions of the farm of each for cultivation and occupation, so that they who worked upon the road one year should dwell upon its borders as farmers thereafter. By this method he believed that by the time the road should be built the line of it would be tolerably well settled, and a large local traffic created.

"Josiah Randall, Esq., submitted to the meeting a series of resolutions which were heartily adopted, and from which I quote the following:

"'Whereas the completion of a railroad from Lake Michigan to the Pacific would secure the carrying of the greater portion of the commerce of the world to American enterprise, and open to it the markets of Japan and the vast empire of China, of all India, and of all the islands of the Pacific and Indian Oceans, together with those of the Western Coast of Mexico and South America;

"'And, whereas, we have in our public lands a fund sufficient for and appropriate to the construction of so great and beneficent a work; and the proposition of Asa Whitney, Esq., of New York, to construct a railroad from Lake Michigan to the Pacific for the grant of a strip of land sixty miles wide, offers a feasible and cheap, if not the only, plan for the early completion of an avenue from ocean to ocean; therefore,

"'*Resolved*, That we cordially approve of the project of Asa Whitney, Esq., for the construction of a railroad to the Pacific, and respectfully petition Congress to grant or set apart, before the close of the present session, the lands prayed for by Mr. Whitney for this purpose.'"

The above resolutions will serve to indicate the character of those subsequently adopted by meetings in other cities and by legislative bodies.

In 1848 Mr. Whitney made another effort in Washington. He obtained select committees in both Houses of Congress for the consideration of his bill. Mr. Pollock, of Pennsylvania, was chairman of the House Committee, and Mr. Niles, of Connecticut, of the Senate Committee. The bill did not provide for any corporate company. It authorized Asa Whitney, his heirs or assigns, to construct a railroad "from any point on Lake Michigan or the Mississippi River he may designate, in a line as nearly straight as the face of the country will admit, and where the streams may be bridged, to some point on the Pacific Ocean where a suitable harbor may be had." It set apart all the government lands lying within thirty miles of the line to furnish means by their sale for the construction of the road, and allowed Whitney to select indemnity land anywhere in the United States in lieu of such tracts as had already been disposed of within those limits. Whitney was to pay the nominal price of ten cents per acre for the grant as fast as sales were made. For every section of ten miles of the road built, a five-mile slice of the sixty-mile wide grant was to be conveyed to him. The other five-mile strip was to be sold by the government and the proceeds were to form a fund for building the road through poor and unsalable lands. Whenever the cost of ten miles of road exceeded the returns from the sale of five miles of the grant, then Whitney was to demand a sale of the reserved lands, and receive enough of the proceeds to make good the deficiency. The road was to be completed within twenty-five years, and was to be of six-foot gauge, laid with rails weighing sixty-four pounds to the yard. When finished, the unsold lands within the grant were to be sold to form a fund to operate the road for ten years. Whitney was to be the sole owner, but the government was to establish tolls and regulate the operation of the line, and pay him a salary of $4,000 for managing it.

The Senate Committee reported favorably Mr. Whitney's bill in 1848, but Mr. Benton attacked it "in a boisterous and unparliamentary manner," and it was tabled by a vote of 27 to 21. The strong vote it received showed that the measure was popular, in spite of its curious concentration of the power and profit of the proposed enterprise in the hands of one man.

Whitney made a final effort in 1849. A volume he published in that year, entitled, "A Project of a Railroad to the Pacific" may be seen in some of the public libraries. It begins with an address to the people of the United States, in which Whitney pleaded for his project in this manner: "Will you, then, allow me to take these wilderness waste lands, as they are now, except to a small extent, without timber, without navigable streams, without value, and impossible of settlement, and build this great highway for the nation, with the improved facilities it would afford; settle the lands with a population, which would be a source of wealth and power, and give to the people a road, not to earn dividends for a company, but requiring tolls sufficient for the expenses of its operation and repairs, and making it a sure means of adding millions to the national treasury, without the outlay by the nation of one dollar, and all under the control of Congress?"

Whitney estimated the length of road at 2,030 miles, and the cost of construction at $40,600,000, to which he added $20,000,000 for repairs and operation until the road should pay expenses, making a total of $60,600,000. The land grant was figured at 77,952,000 acres, about 30,000,000 acres more than the grant subsequently made to the Northern Pacific Company. Whitney thought that only 800 miles of the grant would contain good land. The route indicated on the map he submitted to Congress was shown by a line drawn from St. Joseph, Mich., to Prairie du Chien, Wis., thence straight across the country to Lewis and Clarke's Pass, in the Rocky Mountains; thence down the Clearwater and Snake Rivers to Walla Walla and the Columbia, and finally across the Cascade Mountains to Puget Sound. Whitney believed he had selected the only route offering any hope of success. He wrote in his pamphlet: "In my examinations of this vast subject the first and most important points of consideration were the means and route—the means being the public lands, the route must be through to make them available; and when I found the only available lands for the work on the line of the only feasible route—the only route possessing direct and cheap means of transit to and intercourse with the principal Atlantic cities—the only route which could furnish on the commencement of its line timber and materials for the work and for the settlement of the country for almost the entire line—the only route which would shorten the distance between Europe and Asia so as to force a change to it—the only route where the climate would permit us to take our vast products from the soil to the markets of all Asia—the only route where all the streams from ocean to ocean could be bridged—and the only route which could carry and sustain almost an entire line of settlement with it to the Pacific Ocean—and finding here all those advantages, which do not exist in any other route, I did feel that I could not be wrong, and that Nature's God had made this for the grand highway to civilize and Christianize all mankind."

Whitney was right in nearly all the points he made in this eloquent summary of the advantages of the Northern route to the Pacific. It is not the only feasible route—for all routes are feasible to modern engineering skill—but it is unquestionably the best route in both an engineering and a commercial sense, and is, as he foresaw, the only one traversing a country capable of sustaining a continuous belt of settlement. Whitney had talked with Fremont and Emory, who had recently traversed the continent—one to San Francisco, and the other to San Diego—and he knew of the heavy snows on the Sierra Nevada, and of the vast deserts on the Southern route. His knowledge of the Northern route was formed from Lewis and Clarke's journal, and the narratives of the fur traders.

The high-water mark of his project in Congress seems to have been reached in 1848. He continued his exertions for several years afterward, but without success. The struggle over the slavery question absorbed attention. The air was murky with the clouds of sectional strife. Men could not see far into the future. There was little interest in schemes of national development. Whitney's project languished. It produced one important result, however: the government determined to survey four routes to the Pacific, with a view to learning whether a railroad by any or all of them was feasible. In this survey the Northern route had to be included, although the Southern statesmen, then at the head of affairs in Washington, had no liking for it nor confidence that it would be found practicable.

Whitney spent his fortune in his efforts to educate public sentiment on the question of a railway to the Pacific and to obtain a land grant from Congress. He passed his last years keeping a dairy and selling milk, it may be, to the very Congressmen who had voted to give him a belt of land sixty miles broad and over two thousand miles long. He died poor—the usual fortune of men who project great enterprises ahead of their time.

Toward the close of Whitney's efforts in Congress his project was sharply antagonized by several rival schemes, the most conspicuous of which, because supported by William H. Seward, was the "National Pacific Railroad" plan, devised by George Wilkes, of New York. Its original feature was the election of commissioners by the Legislatures or the people of the several States, to form a Board to build and manage the road. Mr. Wilkes was not so much concerned with the question of the route as with that of the best organization for a company. Thomas H. Benton projected a line from St. Louis by way of Pueblo, New Mexico, to San Francisco, with a branch to

Oregon, which he advocated with characteristic vehemence on all occasions. A convention was held at Chicago, in the spring of 1849, to consider the whole subject of internal commerce. Seward wrote a letter to it favoring the Wilkes' plan, and W. M. Hall, of New York, made a speech in its behalf, in which he expressed the belief that his own name, with that of George Wilkes, would be inseparably linked in history with the railroad soon to be built to the Pacific. In the fall of the same year a Pacific Railroad convention met at St. Louis, and was presided over by Stephen A. Douglas. Benton's plan was defended by himself, and J. Loughborough, a St. Louis lawyer, presented what he called "a proposition for harmonizing all sections and parties of the Union." Whitney's last map, as shown to this convention, marked out a route from Chicago by way of Prairie du Chien, Council Bluffs and the South Pass to Snake River, down that stream to Fort Walla Walla, and thence across the Cascade Mountains to Fort Nisqually, on Puget Sound. Loughborough's compromise line ran from Independence, Missouri, to the South Pass, and thence by way of the Humboldt River to California, with a branch to Oregon and termini at Yaquina Bay, Fort Vancouver, on the Columbia, and Fort Nisqually on the Sound. The St. Louis Convention opposed Whitney's plan as "a monster speculating project to give him a sweep of territory larger than the domain of eight sovereign States, with an ocean front of sixty miles, comprising the mouth of the Columbia and several smaller harbors, and with the contracting powers and patronage of an emperor."

About this time Dr. Hartwell Carver, of western New York, claimed to be the first man to dream of a railroad across the Rocky Mountains, and rushed into the public view with a demand for an exclusive and perpetual charter to build a road from Lake Michigan, by way of the South

Pass, to San Francisco, with a branch to the mouth of the Columbia. His project found little favor, and he was ridiculed at the St. Louis Convention for "hurrying forward on the heels of Whitney and Wilkes." His financial scheme contemplated a land grant and a subscription by the Government to the stock of his company.

CHAPTER VIII.

EDWIN F. JOHNSON'S EFFORTS.

An Eminent Engineer Takes up the Pacific Railway Project—Edwin F. Johnson's Career—Early Advocacy of Railroad Transportation—Plan for Railroad from the Hudson to the Mississippi—Chief Engineer of the Erie Railway—At Work in Wisconsin—Articles in the Railroad Journal—Arguments in Favor of the Northern Route—Robert J. Walker and Jefferson Davis—Schemes of Southern Politicians—Johnson's Letters Republished—His Map and Profile.

AFTER the Northern Pacific Railroad project was abandoned in despair by Asa Whitney, it was taken up and kept alive before the public by Edwin F. Johnson. He regarded it neither from the standpoint of a theorist nor from that of a speculator eager for profit from a valuable franchise and a grant of public lands. He was one of the great engineers of his time—a time when engineering talent was but little developed in this country and men who could originate and carry forward extensive public works were few. He was, besides, a statesman by instinct, a close student of public questions and remarkably familiar with the topography, climate and productions of all sections of the United States. There was probably no other man living at the time who knew as much about the belt of country between the great lakes and the Mississippi Valley on the east and the Pacific shores on the west, although he had never been further west than St. Paul. He had so gathered and digested all the information on the subject available in books and from the conversations of army officers, trappers and traders that he could describe the plains, valleys, mountain passes, forests, water-courses and harbors to be traversed or touched by the proposed railroad much more accurately than most travelers can describe the objects they have actually seen.

Mr. Johnson was born in Essex, Vt., in 1803, and in early life assisted his father, an eminent civil engineer, who ran the international boundary line from the Connecticut River to the Bay of Fundy. Later he was a professor in an academy at Middletown, Vt. Resuming his profession of engineering at the age of twenty-six, he continued in it until his death, in 1872. Mr. Johnson was one of the first advocates in the United States of railways as a means of transportation. The railway system was in its early stages strongly antagonized by the canal interest. He came to the conclusion, in 1828, that railways must ultimately take the lead of canals, notwithstanding the success of the Erie Canal had created an intense feeling in favor of that kind of improvement. So strong was the feeling, that in 1825 the Legislature of Pennsylvania adopted the canal system in face of a report from William Strickland, who was sent to Europe to investigate both the canal and railway systems, and who strongly recommended the latter. The ablest engineers at the time were very doubtful about the future of railways. One of the most prominent, Judge Wright, writing to the President of the Cheasapeake and Ohio Canal, placed the railway in a middle position as a means of transportation "between a good turnpike and a canal." Mr. Johnson at the age of twenty-five clearly comprehended the importance of rail transportation, and saw that it was destined to immense development in the near future; this, too, before the opening of the Liverpool and Manchester line, which demonstrated the value of locomotive engines.

As early as 1826, Mr. Johnson advocated a railway from the Hudson River to the Mississippi. He kept the project alive in the midst of his engineering labors on the new railroads in the Eastern States, and in 1831 wrote a pamphlet on the subject and caused it to be distributed in all the towns and villages along the entire route he had marked out for the projected road. This work may be called the inception of the New York and Erie Railway, of which he became chief engineer in 1836.

In 1852 Mr. Johnson was engaged in Wisconsin as chief engineer of a new railroad called the Chicago, St. Paul and Fond du Lac, which afterward became the Chicago and Northwestern. The original project for this road contemplated a terminus at St. Paul, but when the lands granted by Congress to the State of Wisconsin to aid railway construction came to be transferred by the Legislature a Milwaukee company succeeded, after a notable struggle, in getting the grant to the Mississippi for a line to La Crosse. St. Paul was thus deprived of railroad communication with the East for many years.

With Mr. Johnson, as a capitalist and railroad builder, was Thomas H. Canfield, of Burlington, Vt., who afterward took a prominent part in Northern Pacific affairs. Robert J. Walker, of Mississippi, ex-Senator and ex-Secretary of the Treasury, was interested in the same road, with Nathaniel Talmage, an ex-Senator from New York. While the road was being constructed from Chicago to Fond du Lac, Johnson used to have long talks with Canfield about a line to the Pacific from St. Paul. At this time Johnson wrote several articles in Poor's *Railroad Journal* in favor of a road to the Pacific by way of the valleys of the Missouri and the Columbia. Canfield became warmly interested in his arguments in favor of the Northern route, and encouraged him to reprint the letters in pamphlet form. While Johnson was preparing the pamphlet Walker went on to Chicago, and the manuscript was shown to him. He was greatly impressed with the chapter summarizing the characteristics of all the routes proposed, and pointing out very clearly the advantages of what Johnson called the valley line, by way of the Missouri, or the Yellowstone, and the Columbia, and insisted on taking it to Washington and showing it to Jefferson Davis, who was then Secretary of War, and the recognized leader of the ultra-Southern element. The schemes of Davis, Walker, and the other Southern leaders looked toward the eventual conquest of Mexico, and the spread of slavery over its territory. The desperate attempt to push the institution of slavery northward began later with the repeal of the Missouri compromise and the passage of the Kansas-Nebraska bill in 1854. In 1852 and 1853 the Southern leaders were still looking southward. They were all agreed that no railroad should be built to the Pacific north of the 35th parallel. The reading of Johnson's chapter is said to have spurred Davis to immediate action to set on foot government surveys of all the proposed routes. He wanted to get the matter in his own hands, and to this end used his influence to obtain the adoption by Congress of a section in the Army bill of 1853 which gave to the War Department the full control and direction of the surveys.

Whether Davis had confidence in Johnson's statements about the low altitude of the mountain passes between the Missouri and Columbia valleys, and the comparatively light snow-fall on the northern route, cannot be said ; but he knew how high was the reputation of the Vermont engineer, and was evidently a little anxious lest his letters and pamphlets should stimulate a new movement in favor of the route he so strongly commended before the Southern scheme for a road across Texas and New Mexico could be organized and obtain government sanction and aid.

It was alleged at the time, perhaps unjustly, that political motives influenced the selection of the officers put by Mr. Davis in charge of the surveys, and that reports in favor of the two southern routes were arranged for in advance. It was also charged that the two officers put in command of the northern survey were expected to report against that route, because of their sympathy with the Democratic party as then controlled by the South. We may dismiss these rumors to the limbo of the partizan and sectional controversies of the past. The two officers in question were Stevens and McClellan. Stevens, as we shall see, became an ardent advocate of the northern route, and for years was its most conspicuous advocate. McClellan, who explored Puget Sound, the Columbia River and the Cascade passes, made a rather meagre report on his end of the line, and his statement that there is only one practicable pass in the Cascade Range besides that of the Columbia River has long since been disproved; still there is no question as to the serious character of the range as a barrier to easy railway building, and McClellan was not an eminent engineer like Johnson. His mental organization, as exhibited when he was in command of the army of the Potomac, was such that he saw difficulties plainly, but did not readily see the means of overcoming them.

In 1853 Mr. Johnson's letters appeared in book form, with a map and profile, the elevations upon the latter being mainly deduced from the flow of the streams and such other evidence as he was able to collect. The line as indicated on this map, started from Chicago, with a branch from the head of Lake Superior, joining it at Breckenridge, on the Red River of the North, crossed the plains to the Missouri, followed the north bank of that stream and the Dearborn River to the mountains, thence ran to Flathead Lake and Fort Colville, and ended at Bellingham Bay, on Puget Sound. Mr. Johnson's map, constructed from a careful study of the journals of the Lewis and Clarke expedition, was much more full and accurate than that given in the published narrative of those explorers. He traced the course of the isothermal lines, and showed that, beginning with what is now Minnesota, and proceeding west, the winter climate becomes gradually milder, until at Puget Sound a mean winter temperature warmer than that of Chesapeake Bay is found. He called attention to the low altitudes of the passes between the head-waters of the Missouri and those of the Columbia, and to the moderate amount of snowfall on that portion of the Rocky Mountain chain, as shown by the reports of all explorers. It is a remarkable fact that Johnson's profile of the Northern Pacific route, drawn before any actual instrumental measurements of elevations had been made west of Minnesota, does not differ more from the actual elevations since ascertained than would probably the measurements of two surveyors using different instruments. It is interesting at this time to read the following summary made by Mr. Johnson of the arguments in his pamphlet of 1853, written, it should be remembered, several years before the full results of the government survey under Major Stevens were made known to the public.

1. Its direct connection at the eastern extremity with the cheap navigation of the great lakes and the St. Lawrence chain of waters, which reach nearly half way from the Atlantic to the Pacific.

2. Its terminus on the Pacific at a point or points more favorable for concentrating the trade of that ocean and of the interior than any other points further south.

3. Its location along the great valleys of the Mississippi, Missouri, and Columbia rivers, which, with their tributaries, are navigable for long distances, a navigation which is of the utmost importance in connection with the

proposed railway in facilitating its construction and giving to it support when completed.

4. Its connection with the navigation of the Red River of the North, a navigation which extends through a fertile valley into the British possessions, uniting there with the Assiniboine and Saskatchewan rivers, which flow through a region having large agricultural and mineral resources, as ascertained by explorations recently made under the direction of the Canadian Government.

5. In the comparative evenness of its surface and consequent cheapness, and in the lowness of the gradients upon it, the line crossing the divide of the Rocky Mountains, where the sources of the Missouri and Clarke's branch of the Columbia interlock, the backbone of the mountains being there broken down so as to be overcome by a railway with gradients not exceeding about forty feet to the mile, and with its main summit 2,500 feet lower and coast range summit, if the line is carried across it, 4,000 feet lower than the Nevada summit, upon the route through the south pass to San Francisco.

6. Its freedom from deep snows in winter, the destructions from this cause being greatest upon the route by the 42d parallel leading through Salt Lake to San Francisco. This difference in the character of the two routes is produced by the greater elevation of the latter route and narrowness of its defiles, and the absence of moisture in the winter months in the atmosphere of the northern route to produce snows.

7. In its rich mineral productions, excelling probably in this respect other routes. Its gold fields not being surpassed, if indeed they are equaled, by those of California, and being better supplied with timber, water, and fuel; coal being now mined in Washington Territory on the Pacific, and lignite of a superior quality having been found over an extensive section of the route and in its

vicinity, and upon the Saskatchewan Valley north of the national boundary east of the mountains.

8. In its superiority over other routes in its capability of sustaining a greater population, and contributing more largely to the support of a railway, as evidenced by the greater quantity of game found within its limits, and its being the abode of the greatest number of Indians to be found between the Mississippi and the Pacific, consisting of the Sioux, the Crows, the Mandans, the Blackfeet, and the Flatheads, all, except the Mandans, being large and powerful tribes. All these find an easy and comfortable support in what the country can furnish, which cannot be said of the resources of any other route to the Pacific.

9. It constitutes the most direct and feasible route within the United States to connect with the shortest line on the Pacific to the ports of China, Japan and Eastern Russia, it being about fifteen hundred miles nearer to the ports of China than the route from San Francisco by the Sandwich Islands, and, being coastwise, offers frequent opportunities for obtaining supplies of fuel and food, thus increasing the freighting capacity of vessels, without deviating greatly from a direct course.

Looking back now at the efforts of the three conspicuous early advocates of the Northern route for a railroad to the Pacific, we see that Dr. Barlow presented the project in its theoretical and patriotic phase; that Mr. Whitney gave it the form of a public movement, and brought it to the attention of Congress and State Legislatures; and that Mr. Johnson placed it upon a practical basis by bringing to bear the experience and special studies of a competent engineer, and showing the actual advantages of the route for railway construction, and the value of the country for settlement.

CHAPTER IX.

THE GOVERNMENT SURVEYS.

Condition of Public Sentiment—Sectional Jealousy—Effect of the California Gold Discoveries—General Agreement that a Railway to the Pacific Coast Must Be Built—The Question of Routes—Five Lines Surveyed—Jefferson Davis Favors the Most Southern—Governor Stevens' Survey of the Northern Route—Thoroughness of his Work—Advantages of the Northern Route Fully Demonstrated—Stevens' Report—His Writings and Public Addresses in Favor of the Northern Pacific Railroad Project—His Death on the Battle-field.

ONCE launched in Congress the Pacific Railway movement had inherent vitality enough to keep alive. The peace with Mexico soon afterward added to the domain of the United States the vast area now comprised in the States of California and Nevada and the Territories of New Mexico, Arizona and Utah. The gold discoveries followed, and thousands of eager treasure seekers, hardy pioneers and restless adventurers, crossed the plains and mountains of the interior or sailed into the Bay of San Francisco in search of the new El Dorado. Hitherto the only route spoken of in connection with the project for a railroad across the continent was that followed by Lewis and Clarke. Now the scheme widened. The South, which controlled the government, had before taken little interest in the plans of Whitney, but the conquest of territory from Mexico opened the possibility of a line which should be of advantage to the Southern States and should have its western terminus in the new gold region. Thus the situation changed. That a transcontinental road must soon be built and that the government would have to aid its construction became the general sentiment.

If there was any dissent from this proposition, it was from its last clause, and it came from the strict constructionists of the Constitution, who held that the Federal government had very little power beyond carrying the mails, fighting Indians and coining money. But even the State rights men of the South, always eager to curb the national power unless they could make it work for the advantage of their own political schemes, were ready to advocate a railroad provided its eastern terminus was at some point in their section. Asa Whitney and his magnificent project for a railroad to the mouth of the Columbia were almost forgotten for a time in the excitement over the slavery question which prevailed after the close of the Mexican War, and was heightened rather than allayed by the compromise measures of 1850; but the general idea of a Pacific Railway was not allowed to drop out of sight. Indeed, the sectional jealousies which raged worked in some measure to its advantage. The North wanted a line connecting with roads reaching the seaboard at New York, Philadelphia, and Boston; the South insisted that the proper eastern termini were New Orleans and Memphis, and that the traffic to be opened should flow to the ports of the Gulf of Mexico and the South Atlantic ports.

It would not have been possible in 1853 to secure any action from Congress looking to the opening of any particular route, or even to its preliminary survey, but it was feasible to throw together all the suggested routes and obtain an appropriation of money to survey them all. This was actually done. In a section of the Regular Army Appropriation Bill, approved March 1st, 1853, provision was made for such explorations as the War Department might deem advisable in order to ascertain the most practicable and economical route for a railroad from the Mississippi River to the Pacific Ocean. The law did not specify the number or latitude of the routes to be explored, but it was the general understanding in Congress that no one which had been advocated as feasible and desirable should be neglected. Jefferson Davis was Secretary of War at the time, and the whole matter of organizing the expeditions and selecting the routes they were to follow was in his hands. He put five separate expeditions in the field early the same spring, to explore as many different belts of country, the first near the 32d parallel, the second near the 35th parallel, the third near the 38th and 39th parallels, the fourth near the 41st and 42d parallels, and the fifth near the 47th and 49th parallels.

The reports of these surveys filled thirteen huge quarto volumes, which were printed by order of Congress, with a profusion of lithographs and woodcuts of scenery and Indian groups and numerous maps. In submitting the reports to Congress, in 1855, Mr. Davis summed up the information obtained very clearly and forcibly, and concluded by a recommendation of the 32d parallel route, the most southernmost of all, characterizing it as the shortest line from the Mississippi River to the Pacific Ocean and to San Francisco, the greatest commercial city on that coast; the easiest to build, and the only route, save that of the 38th parallel, free from the danger of obstruction by snow. Being a Mississippian his predilection was strongly in favor of a line that should leave the Mississippi River at a point no further north than Vicksburg. He was not only a Southerner, but an extreme Southerner, who wanted to see the seat of empire of the American continent established in the Gulf States.

Of the five explorations we need concern ourselves only with that of the northernmost route. This was placed in charge of Isaac I. Stevens, an experienced army officer who had served in the Mexican War, and had held a position in the Coast Survey Office until appointed Governor of Washington Territory, in March, 1853. Stevens was a man of broad views, liberal education and strong character. He did his work so thoroughly that there was little necessity for further preliminary surveys to ascertain the practicability of the Northern route to the Pacific when, ten years later, the project for a railroad assumed a business-like shape. His instructions were to operate from St. Paul, or some eligible point on the Upper Mississippi, toward the great bend of the Missouri River, and thence on the tableland between the tributaries of the Missouri and those of the Saskatchewan to some eligible pass in the Rocky Mountains.

Governor Stevens determined that the exploration should be conducted in two divisions, operating respectively from the Mississippi River and Puget Sound; and that a depot of provisions should be established by a third party at the St. Mary's village, at the western base of the Rocky Mountains, to facilitate the winter operations of the exploration, and enable the exploring parties to continue in the field the longest practicable period; and that all the parties should be organized in a military manner for self-protection, and to force their way through whatever difficulties might be encountered.

The western division was charged with the duty of exploring the passes of the Cascade Mountains, from the Columbia River to the British boundary, and of pushing eastward to meet the eastern division between the Cascade and Rocky Mountains. Captain George B. McClellan, of the Corps of Engineers, was assigned to the charge of this division. Lieutenant Rufus Saxton, Jr., in addition to establishing the depot at the western base of the Rocky Mountains, was directed to make a careful survey of the country passed over by him, with a view of combining the operations of the eastern and western divisions.

The eastern division, starting from St. Paul, was under the personal direction of Governor Stevens. With him were many persons who afterward obtained fame as officers or men of science. F. W. Lander, afterward a brigadier general; Lieutenant John Mullan, who later built the wagon road from Fort Benton to Walla Walla, and Cuvier Grover, then a lieutenant and afterward a major general of volunteers and a colonel in the regular army, were among the officers. Captain McClellan, who commanded the division of the party operating from the Pacific coast, was afterward the Commander-in-Chief of the Army of the Potomac, and later the Democratic candidate for President. Lieutenant Saxton, who explored the Rocky Mountain regions, became in the civil war a brigadier general. Probably there was never a railroad surveying party put in the field which contained so many future great men.

Governor Stevens left St. Paul with the eastern division of the expedition on May 24th, and traveling northwestwardly arrived at the Sheyenne River July 4th, and at Fort Union, at the mouth of the Yellowstone River, August 1st. A wide belt of country was explored by throwing out small parties on either side of the main body, with instructions to rendezvous at a given point ahead. At Fort Union, Lieutenant Mullan was detailed with a party to survey the Valley of the Yellowstone. He ascended the river to a point not far from the present town of Billings, and then turning northward through the Musselshell country and Judith Basin rejoined the main party at Fort Benton, near the Falls of the Missouri, which point it reached on September 1st. Here another division of the force was made. Lieutenant Mullan went back to the

Musselshell and, taking guides from a camp of Flathead Indians, crossed the Belt Mountains to the junction of the three rivers forming the Missouri, and thence pushed westward over the main range of the Rocky Mountains to Fort Owen, on the Bitter Root River; Lieutenant Grover reconnoitred Cadotte's Pass; Mr. Lander examined the Marias Pass and the country to the Kootenai post; and Governor Stevens explored the country north of Fort Benton, including the Sun and Marias valleys and the base of the mountains. Before leaving Fort Benton the explorers had the satisfaction of being joined by Lieutenant Saxton's party from the Pacific coast. Saxton, who had ascended the Columbia River, and crossed the plains at the Jesuit mission on Lake Cœur d'Alène and the Bitter Root Range at the pass near the lake, met Lieutenant Grover in command of Stevens' advance party on the summit of the Rocky Mountains in Cadotte's Pass.

The different parties reached Fort Owen in good time. There Mr. Tinkham, a resolute young civil engineer, was sent back to examine the western approaches to the Marias Pass, Mr. Lander was directed to explore the St. Mary's (now Bitter Root) Valley, Lieutenant Donelson was sent down the Clarke's Fork, and Governor Stevens crossed the mountains to Lake Cœur d'Alène. Stevens reached the Mission on October 12th, and proceeding down the Cœur d'Alène River next day met a Spokane Indian, who told him of a party of thirty men that had reached the Columbia, opposite Colville, the day before. Stevens knew that this must be McClellan's party, which had come from the Cascade Mountains and Puget Sound. By pushing on all night he met McClellan next morning. The two had not heard from each other since they separated in May, when talking about their probable place of meeting they had spoken of Colville. The united force proceeded to Walla Walla and the Dalles, reaching the latter place on

November 12th. Early in December Stevens arrived at Olympia, on Puget Sound. He returned to the Rocky Mountains next year for further explorations, and to gather up the results of the work of his detached parties which rendezvoused at Walla Walla.

Captain McClellan surveyed the country between Seattle and the Columbia Valley by way of the Valley of the Cowlitz, and thence followed the Columbia up to the mouth of the Yakima. Then going up the Yakima to its head-waters in the Cascade Range he examined the Snoqualmie Pass as far as a point three miles west of the dividing ridge. He reported to Governor Stevens that the Yakima Pass was barely practicable, and that only at a high cost of time, labor and money, while the Columbia River Pass was not only practicable, but remarkably favorable, being by far the best between latitude 45° 30′ and latitude 49°. "The question," McClellan wrote, "is, after all, reduced to a choice between the shorter line, high grades, a very long tunnel, and almost certain difficulty from the snow, in one case; and the longer line, low grades, little or no tunneling and no trouble from the snow, in the other. I prefer the latter." Governor Stevens sent A. L. Tinkham, who had done winter service in the passes of the Rocky Mountains, up to the Snoqualmie Pass in the winter of 1854, to measure the depth of snow. Tinkham found seven feet in the pass on the 21st of January. McClellan in his report, written in February, 1854, threw doubts on the value of Tinkham's measurement and said that he was still of the opinion that in ordinary winters not less than from twenty to twenty-five feet of snow would be found in the passes during the most unfavorable months of the year. A personal difference between Stevens and McClellan grew out of this matter of the snow in the Cascade Passes, Stevens preferring to indorse the view of Tinkham rather than that of McClellan, and friendly relations were severed until the two met in Washington during the war, when a reconciliation took place.

The general results of Gov. Stevens' explorations were to show that there was an easy route for a railroad from St. Paul to the Rocky Mountains, either by the Valley of the Missouri or that of the Yellowstone; that the main range of the Rockies offered no obstacles that could not be overcome by a tunnel and ordinary mountain grades; that the Bitter Root Spur was more formidable, but could be turned by way of Lake Pend d'Oreille; that there were several practicable passes in the Cascade Range, and that the Valley of the Columbia offered a favorable though expensive route. In a word, Stevens showed that the Northern route to the Pacific was not only a practicable but a very favorable one, following valleys or traversing plains for nearly its whole length, and crossing the mountain backbone of the continent at comparatively low elevations. His report served afterward as the solid foundation upon which the Northern Pacific Railroad enterprise as a business project rested. He became an ardent advocate of this route, and by his writings and public utterances did much to make its merits known.

Governor Stevens's advocacy of the Northern route, beginning immediately after the completion of his survey, continued until his death. He was of an active, ardent turn of mind, and combined in his disposition the accurate, practical habits of the trained engineer with the boldness and imagination of a projector of great enterprises. He could estimate with remarkable correctness the cost of constructing railroads through a wilderness, and speak with authority on gradients, tunnels, and excavations, and at the same time he could make figures eloquent, and illumine dry pages of statistics by the faculty of graphic presentation with tongue or pen. When he came East to attend the sessions of Congress, he wrote pamphlets and delivered addresses on the resources of the Pacific Northwest, and the advantages for a railroad of the route he had surveyed. His graphic addresses were illustrated by a map upon which he showed how the isothermal lines make a great sweep to the northward beyond the Mississippi Valley, causing the climate of Oregon and the Puget Sound region to be milder in winter than that of Virginia.

In an address on "The Northwest," delivered in New York, in December, 1858, before the American Geographical and Statistical Society, Governor Stevens gave an admirable, thorough description of the entire line surveyed by him from the Red River of the North to Puget Sound, the soil, scenery, climate, capacity of supporting population, facilities for railway building, etc. He showed that there was a difference in distance in favor of the Northern over the other routes surveyed, and also an advantage in the sum of ascents and descents. In short, he presented the whole argument in behalf of the Northern Pacific Road as it was afterward repeated in support of the bill chartering the company, and in the subsequent appeals to the public for subscriptions to its stock and bonds. Some of his statements were received with a great deal of skepticism, but time has shown that they were strictly and conscientiously accurate.

Among the effective work done by Governor Stevens in behalf of the Northern Pacific Railroad project, mention should be made of a letter he addressed from Washington City to a railroad convention which assembled at Vancouver, Washington Territory, May 20, 1860, to consider means for building a road from the Valley of the Columbia to Puget Sound. In this letter he gave so clear and condensed an account of the Northern route, its distances and grades, as compared with the line then projected to Benicia, California; its advantageous situation in relation to the China and Japan trade, and the adaptability of the country it would traverse for continuous settlement, that the document, printed in pamphlet form, became a cyclopedia in miniature, from which facts and arguments have ever since been drawn by the friends of that route.

A single paragraph may be quoted here, to show that there was no lack of accurate knowledge concerning the habitable character of the Northern belt nearly a quarter of a century ago, had the public been willing to be disabused of the current notion that the region was a hyperborean desert—a notion, by the way, which lingers in some minds even to this day, although there is now an unbroken line of settlements from St. Paul to Puget Sound:

"Nearly the whole of the country on the Northern route," wrote Governor Stevens, "is susceptible of continuous occupancy by our people. There is no such thing as a desert, properly so speaking, on the entire route. There are gaps or intervals where it is only a grazing country; there are portions of the country occupied by mountain ranges which would not admit of profitable cultivation; but, as a whole, the country is fitted for settlement and cultivation, and must be settled and occupied at an early day. Or, to go more into details, from Breckenridge, on the Red River of the North, to the Divide of the Rocky Mountains, the route passes through a strictly cultivable country, capable of continuous settlement, except for about one hundred and fifty miles, in three sections of about equal lengths. On this portion you can plant agricultural settlements at points suitable for railroad or mail stations. From near the Divide of the Rocky Mountains the country is capable of continuous settlement to within twenty miles of the Divide of the Bitter Root Mountains. The eastern half of the Great Plain of the Columbia, the northern and the southern portions, consists of rich river valleys and fertile tablelands. A portion of the western half will not furnish arable land for continuous settlements. Between the Columbia and the Cascade Mountains, the line is flanked on the south by a large body of fertile land, and passes immediately through a fine grass country, and for at least half the distance through an excellent cultivable country. From the Cascade Mountains to the Sound, the line passes through a continuously cultivable country. The whole intermediate country between the head-waters of the Missouri and the Great Plain of the Columbia admits of continuous settlement, except about forty miles on the highest part of the Rocky Mountains, and thirty miles on the highest part of the Bitter Root Mountains."

In this letter Governor Stevens gave a table of distances from the principal cities of the East to Seattle, on Puget Sound, and Benicia, on the Bay of San Francisco, showing that the difference in favor of the Northern route to the Pacific was as follows: from Chicago, 317 miles; from Portland, Maine, 582 miles; from Boston, 344 miles; from New York, 420 miles; from Philadelphia, 466 miles; from Baltimore, 389 miles; from Washington, Charleston, Savannah, Mobile, and New Orleans, 117 miles. These figures were afterward employed with great effect in enlisting support in Congress and in the country for the Northern Pacific enterprise.

Going to Congress in 1857 as Delegate from Washington Territory, Governor Stevens served in that capacity until the rebellion broke out in 1861. He then obtained the colonelcy of a New York regiment, was promoted to be brigadier general, and was killed, while gallantly leading his troops, at the battle of Chantilly, in Virginia September 1st, 1862.

CHAPTER X.

FUTILE MOVEMENTS IN CONGRESS.

Last of Asa Whitney's Project—California's Demand—The Northern Route almost Lost Sight of—Wm. H. Seward's Bill—Henry S. Foote's Southern Pacific Bill—Sectional Strife over the Question of Routes—The Bill of 1855 for Three Lines to the Pacific—Weller's Subsidy and Land Grant Bill of 1856—President Buchanan's Advocacy—A New Bill for a Single Central Line Changed to one for Three Lines, and Defeated in 1859—Curtis's Single Route Bill of 1860—The Prototype of the Union and Central Pacific Railroad Legislation—The Northern Pacific Railroad named and Recognized by Congress in 1861—A Northern Pacific Company organized in Washington Territory.

ASA WHITNEY'S crude project was kept alive in a feeble way in Congress until 1852, when it made its final appearance on the record coupled with a scheme to authorize Samuel L. Selden and Robert I. Scott to build a railroad from the west bank of the Mississippi, not north of Memphis, to the Rio del Norte and the Pacific Ocean at San Francisco or some other point. Here, for the first time, it would seem, was an alliance attempted between the friends of different routes; a proceeding often repeated in the subsequent history of Pacific railroad legislation. The scheme of Selden and Scott for a Southern Pacific railroad, whatever it was, left no trace of itself save the title of a bill in the *Congressional Globe*. It does not seem to have gained in force from its union with Whitney's dying project. Indeed, the whole question of a railroad to the Pacific had now assumed an entirely new phase. The adventurous gold seekers who poured into California during the years 1848, 1849, and 1850 from all parts of the civilized globe, had organized themselves into a stable community, built cities and towns, and established a State government. California was admitted to the Union in 1850, and had her senators and representatives on the floor of Congress to demand that any railroad project supported by the Government should have in view a line terminating at the Bay of San Francisco. This demand seemed only reasonable, inasmuch as the population of the new gold-producing State had already far outstripped that of the feeble agricultural communities of Oregon and Washington Territory. Thus it happened that the Northern route to the Pacific, which prior to the gold discoveries in the Sacramento valley had been the only one seriously considered, almost dropped out of public notice for several years. Indeed, it was barely kept alive by the very intelligent and forcible advocacy of Governor Stevens, aided by the efforts of the Minnesota and Oregon delegation in Congress.

The last heard of Whitney's project was in 1852, when a Mississippi member, named Freeman, speaking in favor of the Southern route from Vicksburg to California, ridiculed Whitney's plan as one "to build a railroad through a barren, uninhabited, frozen region," and produced a letter from a Boston committee, composed of William Ingalls, E. H. Derby, I. C. Dunn, P. P. F. Le Grand, and O. D. Ashley, criticising Whitney's bill on the ground that, as it required him to build only ten miles a year, one hundred and seventy years might elapse before the road was finished.

By general consent the Pacific railroad project was laid aside in Congress while the Government surveys were being prosecuted. In 1853, President Pierce made a long reference to the surveys and the project in general in his annual message, and succeeded in using a great many words without committing himself either to any special route or to the general principle of the constitutional right of the Government to build a railroad or aid in the building of one. Shortly afterward William H. Seward, then a Senator from New York, brought forward a bill for a road from the western border of some State west of the Missouri River to the eastern boundary of California. In this and subsequent legislation proposed or enacted in reference to the Pacific railroad, the principle was followed that Congress had no right to construct a railroad or charter a company for the purpose within the limits of any State; its power extending only to the Territories.

Seward's plan was that the Government should furnish money directly from the Treasury to build a road, and get it back by raising the price of lands in the regions traversed by the line. About the same time Senator Foote, of Mississippi, presented a bill for a railroad from the Mississippi River to California by a Southern route on the basis of a small land grant. The Senate refused to take up either of these bills, and there was so much opposition in the House that the whole project of a Government road to the Pacific was dropped for a time. In December, 1854, a resolution declaring it to be the duty of Congress to pass an act providing for the immediate construction and early completion of such a road was tabled by a vote of 119 to 68.

In 1854 and 1855 there was a great deal of talk on the subject in both houses of Congress, and many conflicting schemes came to the front. Sectional jealousies and animosities cropped out continually in the debates. The strife was not between different individuals or corporations proposing to build roads with Congressional aid, but between different States and sections of the Union, anxious to make whatever project should finally be adopted tributary to their interests. In looking back from this distance of time nothing is very clear save the sturdy insistence of Thomas H. Benton, of Missouri, that the line should be a central one, and should start from the borders of his own State; the demand of the active young senators, Gwin and Weller, fresh from the gold fields of California, that a railroad across the continent, by whatever route it ran, should end at the Bay of San Francisco; and the clamors of the Texans, Louisianians, and Mississippians for a Southern route.

There were select committees in both houses on the general Pacific railroad project, and in 1855 a bill was reported proposing that three lines should be chartered and aided with land grants; one from the Western border of Texas to California, one from the Western border of Missouri or Iowa to California, and one from the Western border of Wisconsin to the Bay of San Francisco or to the Pacific Ocean in Oregon or Washington. The report of the Government surveys was at that time being distributed, and there was very little concentration of opinion either in regard to the best route or the proper means to facilitate construction of a road. Nevertheless the Senate passed the bill on February 10th, 1855, by a vote of 24 to 21, and gave to each of the lines a land grant of twelve alternate sections on each side of the track, and a contract for carrying the mails at $300 per mile per annum. No subsidy in money was given, nor does it appear that any individuals or companies stood ready to undertake the work. The bill, in fact, was a hasty, crude, semi-political measure—a sort of pooling of issues between different sections of the country, and, had it become a law, it would have been wholly inadequate to secure the construction of even a single road to the Pacific, much less three. The House passed this bill in a great hurry, and then, apparently astonished at its own action, reconsidered the vote, and recommitted the bill to the committee, from which it did not emerge again during that session.

In the session of 1856 a new bill was prepared by Senator Weller, of California, for a single line starting at the Missouri River, to be aided by a land grant of twelve sections to the mile, and a Government subsidy of $2,500,000 in bonds. The plan was to have sealed proposals for building the road submitted to the Secretary of the Interior and the Postmaster-General, who were to contract with parties making the best offer as to the time when they would agree to surrender the road to the United States. This measure, notable from the fact that it was the first to embody a scheme for Government aid in bonds, was defeated in the Senate by a refusal to consider it. The same bill was presented in the House, and although favorably reported from a committee, met a like fate.

President Buchanan took much more decided ground in favor of the Pacific railroad than President Pierce had ventured to do. In his inaugural address and in his first message sent to Congress in December, 1857, Buchanan advocated the building of a road with Government aid, as a military necessity, and found constitutional warrant in the power given the General Government to provide for national defence. The project had not grown in favor, however, and the usual motion to raise a select committee to consider it narrowly escaped defeat in the House. There was a great deal of skirmishing over the different routes proposed, and long arguments drawn from the reports of the army surveys were thrown into the debates. The Senate committee reported a bill authorizing the President to contract for the building of a single line, the eastern terminus to be on the Missouri River, between the mouths of the Big Sioux and the Kansas River, and the western terminus at the eastern boundary of the State of California. The successful bidder for the contract was to receive twenty sections of land per mile, and a subsidy in five per cent. bonds of $12,500 per mile, and was to complete the road within twelve years and surrender it at the end of the specified time to the United

States to be turned over to the States it traversed, and the Territories when they should become States. The bill went over to the ensuing session, when, after long debates on the location of a line and numerous amendments, the measure was so changed as to simply give authority to the Secretary of the Interior to advertise for proposals for three routes—one from Minnesota to Puget Sound, one from Missouri or Iowa to California, and one from Texas to California, and to lay the proposals before Congress. In this shape it was laid upon the table.

In 1860 the same bill was revived in the Senate, but no action was taken upon it. In the House a new bill was reported, which in its general features was the prototype of the measure subsequently passed for the Union and Central Pacific railroads. It contemplated a line to start from two points; one on the western border of Missouri, and the other on the western border of Iowa, and to unite and run as a single line to the border of California. The plan of bids and proposals for a Government contract was dropped, and a number of men of national reputation were named as corporators. A land grant of six sections to the mile on each side of the track was provided, and a subsidy in Government bonds of $60,000,000. Mr. Curtis, of Iowa, the father of the Union Pacific Bill, passed two years later, was the author of this measure. The House refused to pass it, and sent it back to the committee.

It will be seen that, in the measure of 1860, both the Northern and Southern routes were dropped from consideration, and the idea pressed that the Government should centre its favors upon a single road, to be constructed on what was known as the middle or central route. In the ensuing year the matter assumed a new phase. The House, on December 20th, 1860, passed a bill for a land grant and subsidy to both the Central and Southern routes. So little consideration was shown for the Northern route at the time, that an amendment, offered by Governor Stevens, who had been in the House since 1857 as a Delegate from Washington Territory, granting ten sections to the mile for a road from the Red River of the North to Puget Sound, to be built without other aid from the Government, was rather contemptuously rejected in the House. However, the New England senators coming to the aid of those from Wisconsin, Minnesota, and Oregon, were able to put an amendment on the bill in the Senate, giving a subsidy of $25,000,000 for a railroad from Lake Superior to Puget Sound. A land grant of six alternate sections to the mile on each side of the track in the State of Minnesota, and ten alternate sections for the rest of the distance, was also provided. This measure, thus amended, stopped very far short of doing equal justice to the Northern route. It gave a subsidy of $60,000,000 in bonds to the central route, and $36,000,000 to the Southern route, while it gave only $25,000,000 to the Northern route.

The amendment was offered by Senator Wilkinson, of Minnesota, and contemplated a line from the head of Lake Superior to Breckenridge, on the Red River of the North, and thence to Puget Sound, with a branch from some point in eastern Washington Territory down the Valley of the Columbia to Portland, Oregon. Here, for the first time, the name of the Northern Pacific Railroad Company appears in Congressional legislation. The bill, as thus amended, created a company by that name, and empowered Charles D. Gilfillan, of Minnesota, Nathaniel P. Banks, of Wisconsin, and Isaac I. Stevens, of Washington Territory, to act as a Board of Commissioners to organize a company. The Wilkinson amendment was adopted, by a vote of 22 to 19, and the bill then went back to the House for concurrence. The session was almost at an end, and repeated efforts to take the bill from the Speaker's table, to get it before the House for consideration, failed for lack of a two-thirds' vote.

The name of the "Northern Pacific Railroad Company," did not obtain, however, its first legislative recognition in the action of the Senate in 1861, for as long before as January 28th, 1857, the Legislature of Washington Territory passed "an act to incorporate the Northern Pacific Railroad Company," with a capital of $15,000,000, and authority to increase it to $30,000,000. This company was "authorized and empowered to survey, locate, construct, alter, maintain, and operate a railroad, with one or more tracks or lines of rails, commencing at one of the passes in the Rocky Mountains between the Territories of Washington and Nebraska, and connecting with such road passing through the Territories of Minnesota and Nebraska as the company may elect; thence extending westwardly through the Territory of Washington by the Bitter Root Valley, crossing the Cœur d'Alène Mountains by the most practicable route; thence across the great plain of the Columbia, with two branches, one down the Columbia to Vancouver, the other over the Cascade Mountains to the Sound, with a connection from the river to the Sound." The railroad was to be commenced in three years, and completed in ten years from the passage of the act. Among the incorporators were General Isaac I. Stevens, first Governor of Washington Territory; Colonel Wm. Cock; Elwood Evans; A. A. Denny; Judge Wm. Strong; W. S. Ladd; ex-Senator Ramsey, of Minnesota; and General James Shields, then of Minnesota.

This legislation grew out of the enthusiasm of Governor Stevens for the Northern route, which he had just finished exploring. Those who engaged in the movement little imagined that a quarter of a century would elapse before railway communication would be opened from Puget Sound and the Columbia Valley to the East. They expected a rapid development of their beautiful country; and, while they did not think the money could be raised on the Pacific coast to build a road to the Rocky Mountains, they evidently thought that an organized company, with a charter, would be the first practical step toward putting the enterprise in motion. Nothing but talk, and exuberant writing in the local press, came of this premature effort. The company existed only on paper, and in a few years died a natural death.

The description of the route selected for the proposed road will be intelligible when the fact is recalled that, in 1857, Nebraska embraced not only the present State of that name, but also the present Territories of Dakota and Montana, while Washington included the present Territory of Idaho. The route outlined in the act of the Washington Legislature was nearly the same as the one now followed by the Northern Pacific Railroad, with the exception that it crossed the Cœur d'Alène Mountains, instead of going around them by way of Lake Pend d'Oreille.

CHAPTER XI.

JOSIAH PERHAM'S PEOPLE'S PACIFIC RAILROAD.

Perham's Business Career.—The "Father" of the Cheap Excursion System—Visions of a Railroad to the Pacific.—A Current Misapprehension Corrected.—Perham Not Originally in Favor of the Northern Route.—The People's Pacific Railroad Company.—Failure to Get a Charter in Massachusetts.—Perham's Speech to a Boston Meeting.—The Company Chartered by the Maine Legislature.—Perham's Appeals to Congress for Aid.—His Impracticable Plan of Raising Money by Small Stock Subscriptions.

IN the midst of the rampant sectional jealousies and the confusion of conflicting local projects for a railroad to the Pacific Coast, which prevailed at Washington previous to 1860, there appeared upon the ground a man of definite purpose and strong will who knew exactly what he wanted to do, and who had sufficient earnestness and enthusiasm to convert other men to his views. This was Josiah Perham, who was destined to play an important rôle in connection with the Northern Pacific enterprise. Perham was a peculiar character. He was a good type of a class of men who have the genius and intelligence to conceive large projects, and the energy, honesty of purpose and perseverance to enlist others in their support, but who lack the practical talent to carry them forward to completion. He was born in 1803, in Wilton, Franklin County, Maine, under the shade of Old Blue, a sombre-looking mountain, whose summit was once an important station in the coast survey. In early life he was first a country store-keeper at East Wilton, and afterward a woolen manufacturer at Readford. He made a fortune in what was known in Maine as the great Hallowell land speculation, in the days of President Jackson; but this he lost soon afterward by holding on to his investments until a crash came and made him a bankrupt. Going to Boston about 1842, he began business anew as a wool commission merchant. Fortune favored him again, and he was able to accumulate money and pay off in full, with interest, all the claims of his old creditors, amounting to $35,000. This honorable action gained him the confidence of the merchants of Boston, and enabled him in after years to enlist the support of many of them for his railroad enterprises.

In 1849 Perham failed a second time. He was about to start for California, by the Isthmus route, having sent his son of fifteen years in advance by a sailing vessel, when he met in Boston a man who had brought to that city a painting of the Great Lakes and the Niagara, St. Lawrence and Saguenay Rivers, known as the "Seven Mile Mirror." Except Banvard's Panorama of the Mississippi, it was the first thing of the sort ever exhibited in this country. Becoming interested in the painting, Mr. Perham's active mind saw in it a way to replenish his assets. He devised the cheap railroad excursion system; beginning by bringing into Boston small parties from the neighboring towns at reduced fares to visit the "Great Mirror." The idea was novel, and became popular. Country people could enjoy a day in Boston and visit the "Mirror" at small expense. The railway managers, surprised at the results, gave the scheme their co-operation. Mr. Perham bought the "Mirror," went actively to work to perfect and enlarge his excursion system, and during the season of 1850 transported over 200,000 people to Boston by the various railroads in New England and Canada. He continued the excursion business for many years, applying it to summer travel, and arranging round trips with tickets good for thirty and sixty days—from Boston to New York, thence up the Hudson by boat, to Saratoga, Niagara Falls, Toronto, Kingston, down the St. Lawrence to Montreal and Quebec, Portland, and back to Boston. During the winter of 1861–2, while the Army of the Potomac was encamped near Washington, he sold excursion tickets to the national capital. During the twelve years he was engaged in the excursion business few names were better known than his to the general public of New England. The railroad managers had great confidence in him, and the newspapers called him the father of the cheap excursion system.

In this business Perham again accumulated money, and possessed a comfortable fortune when the vision of the Pacific Railroad dawned upon him in 1853. From that time until his death the vision haunted him night and day, and he could talk of nothing else and think of nothing else. The idea took complete possession of him. He seemed to feel that he had a call from the unseen powers to build a railroad across the continent. He had unbounded faith in his ability to convey to others his own enthusiasm for the project, and spent much of his time in going from place to place and talking about the great scheme to everybody whose attention he could gain. In this respect he followed closely in the path of Whitney, but he did not at first, like Whitney, go to Congress for aid. His idea was that the people of the whole country were ready to come forward and subscribe small sums to the stock of the company, which in the aggregate would amount to enough to construct the road. This fantastic notion took such a strong hold upon him that the most discouraging experiences failed to dislodge it.

In order to remove a wrong impression generally entertained, let it be said here, at the outset of this account of Josiah Perham's career, that he was not in any sense the projector of the Northern Pacific enterprise. His first plan was to build a railroad from the Missouri River to the Bay of San Francisco, and to this he held firmly for nearly ten years, until Congress, in chartering the Union and Central Pacific Companies in 1862, left him, his project and his friends entirely out of the bill. Only then did Mr. Perham turn to the Northern route, which he regarded as the best alternative scheme. Asa Whitney proposed from the first to build to the mouth of the Columbia, and only changed his plan after the settlement of California so far as to include a branch from the Wind River Mountains to the Bay of San Francisco. Perham, although familiar with the claims made in behalf of the Northern route and well acquainted with Governor Stevens, the most conspicuous champion of that route, whom he frequently met at Washington between 1857 and 1860, thought only of the central line until his efforts to obtain the indorsement of Congress for his original scheme proved abortive.

Mr. Perham rallied around him a small group of devoted friends in Boston, and in his old home in Maine, who stood by him very faithfully through all his vicissitudes, and advanced money for his needs after his own fortune had melted away. These men were, for the most part, merchants of modest means and small influence, but among them were some persons of considerable prominence in State and national affairs. The records of Congress afford no trace of Perham's movements prior to 1859, unless, as is possible, he was connected with the National Pacific Railroad project, which frequently appears on the record in the form of a bill introduced and referred to committees. In his efforts at Washington he constantly met with the objection that there was no precedent for an act of Congress chartering a railroad company and giving it a grant of public lands. All previous land grants in aid of railroad construction had been given to the States, and by them turned over to companies of their own creation. The States Rights Democrats, who then controlled the policy of the General Government, held that it was not in the constitutional power of Congress to create corporations. President Buchanan, in his annual message of 1858, used the following language:

> "It is freely admitted that it would be inexpedient for this Government to exercise the power of constructing the Pacific Railroad by its own immediate agents. Such a policy would increase the patronage of the Executive to a dangerous extent, and introduce a system of jobbing and corruption which no vigilance on the part of Federal officers could either prevent or detect. This can only be done by the keen eye and active and careful supervision of individual and private interest. The construction of this road ought, therefore, to be committed to companies incorporated by the States, or other agencies, whose pecuniary interests would be directly involved. Congress might then assist them in the work by grants of land or of money, or both, under such conditions or restrictions as would secure the transportation of troops and munitions of war free from any charge, and that of the United States mail at a fair and reasonable price."

To meet these objections, Perham endeavored to procure a charter for the People's Pacific Railroad Company from the Legislature of Massachusetts. His petition, signed by one hundred and eleven persons, was presented to the Massachusetts House by Moses Kimball, of Boston, on February 20th, 1859. Among the signers were Increase S. Withington, afterward the first treasurer of the Northern Pacific Railroad Company, Edward S. Philbrick, Daniel Chamberlain, W. W. Clapp, Jr., present editor of the *Boston Journal;* Daniel S. Haskell, editor of the *Boston Transcript;* Curtis Gill, editor of the *Boston Commercial Bulletin;* Roland Worthington, present Collector of the Port of Boston; Benjamin F. Cooke, R. W. Holmes, Samuel A. Green and Jabez C. Howe. In aid of this petition another was filed from citizens of Maine, headed by the name of Hannibal Hamlin, and still others from various parts of Massachusetts, and from the States of New York, Illinois, California, Maryland, Tennessee, Alabama, Kentucky, Mississippi, Ohio, Oregon, and Iowa. From these petitions, coming as they did from so many sections of the country, it would appear that Perham had been engaged for some time in working up his project of a State charter, or possibly he used with the Massachusetts Legislature the petitions he had collected with a view of presenting them in Washington. The route described in his own petition for the People's Pacific Railroad was as follows: "From the Missouri River, at a point between the mouth of the Platte River on the north and the mouth of the Kansas River on the south, and from such point by such route as may be most direct and practicable, to the city of San Francisco." This, it will be seen, was substantially the route afterward adopted by the Union Pacific Company.

The bill chartering Perham's company passed the Massachusetts Senate on March 30th. In order to give it force in the House, Perham arranged a meeting at Fanueil Hall, Boston, on the evening of March 31st, which was presided over by Benjamin F. Cooke. At this meeting Mr. Perham made a speech, in the course of which he gave the following outline of his project:

> "I propose to get a charter from the Legislature of Massachusetts by the name of the People's Pacific Railroad Company, with a capital of *one hundred million dollars*, divided into shares of one hundred dollars each, to build the road with, with the legal consent of Congress, and of any States through which any part of the road may be located.
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> "I propose to go before the masses and get the stock taken up in small sums by the people, asking each man to take one share and not more than ten, and requiring ten dollars on each share to be paid when the subscription is made. The amount of such subscriptions will be so small that the payment will not be felt, and yet the aggregate amount of such payments will furnish funds sufficient for the purpose.
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> "There are many instances where the smallest items are paid and yet the total sum is very large. In the omnibus and horse railroad business no man misses the small disbursements, and yet the aggregate is immense.
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> "By a recent computation a most astonishing instance of this fact is shown

to exist in the city of New York. By a reported list of the open drinking saloons of that city, it appears from a careful examination and calculation of the total receipts of those places, on Sundays only, in a single year, it reaches the large total of one million dollars. This total is made up of five and ten cent pieces.

"This plan of accomplishing this end and of meeting the expense of the construction of this road is not new to me. It has been a subject of conversation with me for the past six years in all parts of the country, and not the first person has yet been found who has said it was not the best plan proposed, though some great men think any efforts for this object useless and visionary. The class of men who express such opinions are those who, from necessity perhaps, never move in anything until some other person shows them the way—slow-coach men—off-ox men. The question has often been asked me, is it not too great an undertaking for a private corporation? I have given the President's views upon that subject, and I know the masses, and know it will take with them.

"The name, the People's Pacific Railroad Company, to be owned by the people, in small sums, will be very popular and will go through the country beyond anything ever put before them. Thousands are now waiting for the books to be open to subscribe for the stock.

"I do not want to get this project into politics. I want the *whole* people of the country to subscribe to the stock. I want *one million* people to subscribe for one share each and the road is built.

"I want *twenty thousand* people of Boston and Massachusetts to subscribe for one share each, within two weeks after the books are open, which will give it such force as to sweep the whole country like a whirlwind. I want to get so large a share of the stock taken before Congress meets in December next, that the President will recommend in his message to grant us lands, and the moment we get a grant of lands from Congress the balance of stock not taken will be taken at once. I propose to have a line of magnetic telegraph built as soon as we have got *fifteen million* dollars of the stock subscribed, and will endeavor to have the line of telegraph open during the next session of Congress.

"I am often asked, Why do you seek a charter in Massachusetts? My answer is, because it is my adopted home. I know the press, the railroad people and the masses of the people, and they know me, and your *great men have heard of me.*

"I ask the charter of Massachusetts because I shall have associated with me some of the best men in the country—live men—who will put their energies with mine, and make a long and strong pull to accomplish this great work."

The meeting passed resolutions in favor of Perham's project, but they were of no avail, for the House, on

April 4th, indefinitely postponed the bill. Failing in Massachusetts, Perham had recourse to his own State of Maine, where he had many friends in public life. The Maine Legislature gave him the charter he wanted, and passed a bill incorporating the People's Pacific Railroad Company, which was approved by Governor Lot M. Morrill on March 20th, 1860. It named 110 corporators residing in a dozen different States, but chiefly in Maine and Massachusetts, of whom fifty-one were made commissioners with power to organize the company. The location named for the road was "from a point on the Missouri River, between the mouth of the Platte River on the north and the Kansas River on the south, and on such route from the Missouri River through Utah to the city of San Francisco, on the Pacific coast, and as near as practicable to the present traveled mail route, or by such route as the corporation shall deem expedient and for the public interest."

The original intention seems to have been to select the route afterwards taken by the Union Pacific, under its charter from Congress, in 1862, but the language of the People's charter was broad enough to embrace a northern route, or, in fact, any route. The stock of the company was to be one million shares of one hundred dollars each, and no person or company was to subscribe for more than one hundred shares.

In this act Perham's impracticable idea of a popular stock subscription, embracing people of all conditions in all parts of the country, was first put into shape. He fancied that a million of people would come forward and gladly pay a hundred dollars each to help build a railroad across the continent. In his imagination he communicated his own enthusiasm for the project to the entire population of the United States. This wild plan of a general and spontaneous subscription to stock he put into the bill which afterwards passed Congress, chartering the Northern Pacific Company, and it came near destroying the enterprise at its birth.

The People's Pacific Railroad Company was organized in Boston. Josiah Perham was chosen president, Oliver Frost, vice-president, and I. S. Withington, treasurer. Stock was issued, and it would appear, was sold in small sums of from ten dollars to one hundred dollars to a few of Perham's friends. The history of the scheme, although brief, is not very clear, owing to the fact that many of the papers concerning the company, together with others relating to the first movements for organizing its direct successor, the Northern Pacific Railroad Company, were destroyed in the great Boston fire.

Perham hastened to Washington with his People's Pacific Railroad charter, and was diligent in his attendance upon the committees and in the lobby of the two Houses. From that time forward he endeavored to obtain from Congress a recognition of his company as the one best entitled to Government favor, and asked for it a grant of land and money to aid it to build the proposed railroad. It does not appear that Mr. Perham had anything to do with the development of the subsidy plan which was afterwards made the basis of the legislation for the first line to the Pacific coast; but finding that plan growing in favor, and meeting with but poor success in his efforts to obtain subscriptions to the stock of the People's Company, he was naturally ready to attach it to his project. We shall see in the subsequent chapter, however, that he had not abandoned the notion that it was feasible for him to raise sufficient money to build the road by direct appeals to the people for subscriptions in small sums to his stock.

CHAPTER XII.

THE UNION AND CENTRAL PACIFIC CHARTER.

Five Practicable Routes to the Pacific—Congress Prefers the Middle Route—Political Considerations—Threats of the Southern Element in California—The Union and Central Pacific Railroad Bill—Perham's Project left out—Fruitless Effort in the Senate for the Northern Route—Passage of the Bill—Its Generous Conditions—Profits of Construction—The Route Adopted Follows the Emigrant Trail—Amendment of the Charter in 1864—Condition of the Northern Belt in 1862.

THE Government surveys, as we have seen, disclosed the fact that there were at least five practicable routes for a railway to the Pacific. Each of the lines explored was found feasible, though there were marked differences in the altitudes of the mountain barriers to be overcome, and in the character of the country to be traversed in respect to its fitness for settlement and cultivation. The northern route, traversing the belt of country first made known to the world by the Lewis and Clarke expedition, was found to be the only one offering a soil valuable for farming or grazing for nearly its entire length. The country along the middle route, after leaving the prairies of Nebraska, is mainly barren, save in the basin of the great Salt Lake; the more southern lines west of the narrow alluvial valley of the Rio Grande traversed arid wastes all the way to California, relieved by only a few narrow strips of irrigable valleys or mountain and timber belts.

The beginning of the civil war in 1861 postponed any determination by Congress of the question of the route to be favored by the Government. In 1862, however, when the war was in its most doubtful stage, political considerations hastened action on the transcontinental railway project. California, during the gold fever, had attracted a considerable immigration from the Southern States. The settlers from that section naturally sympathized with the rebellion. The power of the Government, absorbed in the fierce contest raging from the Potomac to the Rio Grande, was but feebly felt on the Pacific coast. A separation of California and Oregon from the United States, and the erection of a Pacific republic or empire, was freely talked of. There were also bold projects of a rebel expedition across the plains to conquer California for the South with the aid of its Southern-born citizens. An expedition from Texas did, in fact, go as far as New Mexico, but was driven back with heavy loss. Meanwhile the loyal people of California urged upon Congress the importance of speedily uniting their State with the East by a railroad, as a political as well as commercial measure. So Congress stopped in the midst of the great task of providing men and money to carry on the struggle for national existence, to create and subsidize corporations to build a railway across the continent. When the first Pacific Railroad Bill was passed, the cannon of the defiant enemy could almost be heard at the Capitol in Washington. This was in June, 1862, shortly after the defeats of McClellan on the Peninsula, and just before the disastrous battle known as the second Bull Run.

This bill, approved July 1, 1862, was substantially the same as the Curtis bill of 1861. It chartered two companies, one to build from Omaha on the Missouri River westward, and the other from Sacramento, in the State of California, eastward, until their lines joined. At the same time it recognized a company chartered by the Legislature of Kansas, and called the Leavenworth, Pawnee and Western Railway Company, the name of which was changed to the Union Pacific, Eastern Division, and afterwards to the Kansas Pacific, and gave to that company like grants of money and public lands to those given the Union Pacific, for a distance of 394 miles west of the Missouri River through the State of Kansas. It further provided for branches to the main Union line, leaving the Missouri River at the towns of Atchison and Sioux City.

In the long list of incorporators named in the bill, nearly every locality and interest connected with the previous movements for a road from the Missouri River to California were recognized except Perham and his New England friends who had organized the People's Pacific Railroad Company; they were crowded out. The rudimentary organizations chartered in New York, Missouri, and Iowa were noticed, as well as the California Company already building from San Francisco to Sacramento, while every little town on the Missouri River from Sioux City to Leavenworth was included among the eastern termini. Perham's friends in Congress made futile efforts in his behalf. Mr. Lovejoy, of Illinois, in the House endeavored to have the People's Bill substituted for that reported by the committee, and Mr. Fessenden, of Maine, spoke of the People's Company as comprising many of the most respectable citizens of his State. Mr. Lovejoy's motion was rejected.

Not much was said in the course of the debate in the House about the northern route, but the Legislatures of Michigan, Wisconsin, and Minnesota had instructed their Senators to support it in preference to any other, and Mr. Doolittle, of Wisconsin, offered a carefully prepared amendment in the form of additional sections to the bill. It provided for three engineers to locate the line from Lake Superior to Puget Sound, for a grant of alternate sections of land for twenty miles on each side of the track, for the sale of the land, and the payment of ninety-three per cent. of the proceeds to the States and Territories traversed by the road, which were to turn it over to the company undertaking the construction, as sections of twenty-five miles of the track were completed. This proposition the Senate rejected by a vote of 15 yeas to 23 nays. The original bill, which had passed the House May 6, 1862, by a vote of 79 yeas to 49 nays, passed the Senate, June 20th, by yeas 35, nays 5.

Under its provisions, the Union Pacific, starting at Omaha, received a subsidy in Government bonds of $16,000 per mile for the portion of its line traversing the great plains, $48,000 per mile for the 150 miles across the Rocky Mountains, and $32,000 per mile for the remainder of the line. The aggregate of this subsidy for the 1,033 miles of the road was $27,226,512. The Central Pacific received a like subsidy in bonds, the $16,000 per mile grant applying only to a short portion of the line west of the Sierra Nevada Mountains, while $48,000 per mile was given for 150 miles across the Sierras, and $32,000 per mile for the long stretch of road through the deserts of Nevada. Thus the Central Company received for the 883 miles of its line from Sacramento to Ogden a little more than the Union Pacific got, the total of its subsidy being $27,855,680. Each company obtained at the same time a grant of public lands of 12,800 acres per mile of road.

By the act of incorporation of these two companies the subsidies of Government bonds were to be secured by a first mortgage on the road, but before any progress was made in the work of construction, an amendment to the charter was passed by Congress, on July 2d, 1864, allowing the companies to issue an amount of their own bonds equal to the subsidy bonds given them by the Government, and the Government's lien was subordinated to the new bonds and secured only by a second mortgage. Economically used, the proceeds of the Government bonds would have been sufficient to build and equip the entire road from Omaha to Sacramento. In effect, the generous legislation of Congress in behalf of the two companies uniting to open the first line of railroad between the Atlantic and Pacific coasts, operated, first, to loan them money enough to build the line; second, to present them with a large area of public land; third, to authorize them to borrow a sum equal to the Government loan on the strength of a first mortgage; and fourth, to allow them to issue and sell stock to the amount of one hundred millions of dollars. Under this arrangement the Companies practically obtained possession of about 2,000 miles of railroad without investing any money of their own, had in addition a large surplus from the Government subsidy and the sale of their first mortgage bonds and of the stock, and owned a land grant of nearly 25,000,000 acres. Under these exceedingly liberal and advantageous, conditions it was not to be wondered at that the construction of the road proceeded rapidly from both ends after the passage of the amended charter by Congress. The time fixed for the opening of the entire line was July 1st, 1876. It was completed May 10th, 1869. Its progress from month to month had been observed by the whole country with great interest, and its completion was an occasion of general rejoicing.

It is fair to say, in this connection, that the Union and Central Pacific Companies, as such, did not realize as large profits as would appear from the foregoing statements. The cost of construction was made unnecessarily great, in order that large profits might go into the pockets of individuals prominently connected with the companies, who were at the same time members of the construction companies which took the contracts for building the line. Thus the nominal cost represented not only the actual necessary expenditure, but a very large margin above the same, which was divided as profits among the stockholders in the construction companies, and enabled them to realize large fortunes. It should also be said that the land grant of the Union and Central Pacific Railroads, forming the first transcontinental railway line, was of small value in proportion to its actual acreage. From the 100th meridian of longitude in Nebraska to the timbered slopes of the Sierra Nevada Mountains, a distance of nearly 1,500 miles, there is very little land available for agriculture. Of the entire grant, extending from the Missouri River to the valley of the Sacramento, more than one-half consists of deserts and mountains not salable at any price, and the greater proportion of the remainder covers dry, elevated plateaux and narrow valleys, valuable chiefly for pasturage, and offering small inducements to farmers.

The route selected for the first railroad to the Pacific coast, aided by the national Government, followed closely the overland trail to California made by the gold hunters in 1849, 1850, and the following years. That, in its turn, had followed as far as Salt Lake in the track of the great Mormon exodus of 1847 and 1848. The route was thus well known long before the railroad engineers stuck their stakes upon it. The overland mail traversed it, and passengers were jolted through in stage coaches, which ran night and day, from the Missouri River towns to Sacramento. It was only natural that this familiar route, leading directly to the cities and gold mines of California, should be preferred by Congress when there was a question of a railroad. There were still other reasons for the choice. Railway lines had already reached the Missouri River opposite the new Kansas and Nebraska towns, and in California a road had been built from San Francisco to Sacramento. Then there were, halfway along that portion of the line which crossed the alkali deserts, the thrifty agricultural settlements of the Mormons around the Great Salt Lake and in the Valley of the Jordan, which afforded supplies of food and reinforcements of laborers.

The friends of the northern route were, however, not idle. They pressed its advantages upon Congress, but at first without much effect. In 1862 Minnesota as a State was but four years old, and the Sioux Indians had, in that very year, burned her frontier settlements and massacred nearly one thousand of her people. Dakota was a buffalo range and an Indian hunting ground. Oregon had a scanty population of farmers and two or three small towns, whose names had hardly reached the East. It seemed hopeless to advocate a railroad to the mouth of the Columbia at that time, although a few years before, previous to the gold discoveries in California, the route of the Columbia and the Missouri was the only one thought of in Congress or the country.

In 1864, when the amended charter of the Union and Central Pacific companies was passed, subordinating the Government loan to their own mortgage, the supporters of the Northern Pacific project, represented in Congress chiefly by the Senators and Representatives from Minnesota, Wisconsin, and from the New England States, were strong enough to get a charter and a land grant. They did not venture to ask for a grant of money or credit. Their plan seems to have been looked upon by most people in and about Congress with a sort of sceptical, good-humored tolerance, and as they asked nothing but land, which was supposed to be of no value, they had, as we shall see in the following chapter, no great trouble in running their bill through side by side with the Union and Central bill, which last was worth fifty millions of dollars to the promoters of those corporations.

CHAPTER XIII.

PASSAGE OF THE CHARTER ACT.

Perham Transfers his Efforts to the Northern Project—Thaddeus Stevens Supports the People's Pacific Scheme—Defeat of the Bill in the House—A New Bill framed creating the Northern Pacific Company—It Passes the House and Senate, and is approved by President Lincoln—Its Principal Provisions—Perham's Impracticable Stock Subscription Plan—The Company Prohibited to Issue Bonds or Mortgage the Road—A Double Land Grant, but no other Government Aid.

AFTER the failure of his efforts to obtain for his People's Company the charter from Congress to build the road to San Francisco, Josiah Perham made a stroke of genius. He transferred himself, his organization, his arguments, and his friends *en masse* to the Northern route. This shifting of position was effected at a fortunate moment. The Northern project had no conspicuous advocate. Governor Stevens had just perished upon a Virginia battle field. The influence of his remarkable report and of his vigorous and persevering presentation to the public of the merits of the northern route, year after year, had been almost sufficient to cause Congress to adopt it without any pressure from the lobby. When the Union and Central Pacific bill passed, there was a general understanding among the leading men in Congress that a road from St. Paul and Lake Superior to Puget Sound should be commenced at no distant day, with the aid of a liberal land grant. The time, therefore, was auspicious for Perham's movement. He had attracted considerable attention at Washington by his earnest arguments, repeated session after session, in favor of a line to California. He had the support of a chartered company, numbering among its directors men of substance and respectability. He wisely determined to ask for no subsidy in bonds, such as had been given to the companies building by the middle route. If Congress would give his People's Company double the land grant given to the Union and Central Companies, he was confident that he could raise enough money by a popular subscription for stock to build the Northern road. The facility with which he changed his Maine charter, his directors and stockholders, from an organization to build a railroad from the Missouri River to the Bay of San Francisco to one to build from the head of Lake Superior to some unknown port on the forest-clad shores of Puget Sound was certainly surprising. The truth is, however, the People's Pacific Railroad Company was Josiah Perham, and the men associated with him in it were his personal friends, whom he had indoctrinated with his absorbing idea that he had a special call and mission to construct a railroad across the continent.

Mr. Perham gained the favor and friendship of Thaddeus Stevens, of Pennsylvania, at that time the most powerful man in either branch of Congress. As the dictatorial leader of the dominant party in the House, Mr. Stevens shaped all important legislation in that body, and rarely failed to carry through the measures he favored, and to defeat those he opposed. It is safe to say, that without his support the Northern Pacific charter could not have been obtained during his lifetime. He was a member of the Pacific Railroad Committee, and as such reported to the House on February 15, 1864, a bill "granting lands to the People's Pacific Railroad Company, to aid in the construction of a railroad and telegraph line to the Pacific coast by the northern route." In respect to route and land grant, this bill was identical with the Northern Pacific bill afterwards passed. Mr. Stevens silenced criticisms on the score of the magnitude of the land grant, by asking Mr. Holman, of Indiana, if he believed the value of the lands approached the value of the subsidies voted two years before to the Union Pacific Company. Objections to adopting a Maine company for a road to run from Minnesota to the Pacific were not, however, so readily met. A carefully prepared speech in favor of the bill, and in advocacy of the claims of the northern route, was delivered by L. D. M. Sweat, a Democratic member from Maine. Mr. Holman offered an amendment, requiring the company to transport the troops and property of the United States free of charge. He had offered the same amendment when the Union Pacific bill was pending, and it had been rejected. Now it was adopted by a vote of 55 to 47. Mr. Donnelly, of Minnesota, spoke in favor of the bill. Mr. Sloan, of New York, had an amendment adopted requiring the road to run north of the 45th instead of the 44th parallel. Mr. Stevens closed the debate, and the House proceeded to vote. Greatly to Stevens's surprise, the bill was rejected by yeas, 55; nays, 66.

After this defeat, Stevens told Perham he must fit his scheme to the temper of the House, and must drop his Maine charter and company. On the 23d of May a new bill, which had been prepared in the Pacific Railroad Committee, was reported by Stevens and recommitted. It was entitled "A Bill granting lands to aid in the construction of a railroad and telegraph line from Lake Superior to Puget Sound, on the Pacific Coast, by the Northern Route." It created a company by direct charter, called the Northern Pacific Railroad Company, and it named as corporators all of Mr. Perham's best friends in Maine and Massachusetts who had aided him in the People's movement, and in addition many eminent capitalists, railroad men and politicians living in different parts of the country, such as John C. Fremont, George Opdyke and Chauncey Vibbard, of New York; R. D.

Rice and A. P. Morrill, of Maine; George W. Cass and J. Edgar Thompson, of Pennsylvania; Onslow Stearns and William E. Chandler, of New Hampshire; Cyrus Aldrich, of Minnesota; John Gregory Smith, of Vermont; U. S. Grant and Wm. B. Ogden, of Illinois; W. Prescott Smith and John H. B. Latrobe, of Maryland; John A. Bingham and Philo Chamberlain, of Ohio; and Alexander Mitchell, of Wisconsin. The bill came before the House on May 31st, on a motion to reconsider the vote recommitting it, and after a few questions had been answered by Thaddeus Stevens, it was passed—yeas 74; nays 50.

The bill was reported favorably from the Senate committee June 27th, with numerous minor amendments, and one which was important, binding the Government to extinguish the titles of Indian tribes to lands embraced within the area of the grant. It passed the same day without a division. The House disagreed to the amendments, and a committee of conference was appointed, consisting of J. R. Doolittle, of Wisconsin, Ira Harris, of New York, and J. W. Nesmith, of Oregon, on the part of the Senate, and Thaddeus Stevens, L. D. M. Sweat, and Ignatius Donnelly, of the House—all conspicuous friends of the measure. The committee speedily agreed, their report was adopted by both Houses, and the bill was signed by President Lincoln, July 2d, 1864.

The readiness with which the two Houses of Congress adopted this important measure was due no doubt, in some part, to Perham's indefatigable labors at Washington, talking to Senators and Representatives about the need and justice of Government aid to a northern line to the Pacific, and of his ability to raise money to build the road; but it was due still more to the education of public opinion through the writings of Edwin F. Johnson and Isaac I. Stevens, on the advantages of the northern route, and to the growth of a sentiment in the country that fair treatment of the Northwestern States and Territories by the General Government required that a railroad should be built to the Pacific, connecting the waters of the Great Lakes with those of the Columbia River and of Puget Sound.

In its provisions for organizing the company, the Northern Pacific bill followed closely the bill passed two years before creating the Union and Central Companies. The corporators were made a Board of Commissioners, and directed when and where to meet, how to organize, and where to open books for subscriptions to the stock. After two millions of dollars were subscribed and ten per cent. of the subscriptions paid in, the subscribers were to elect directors, and the company, having first formally accepted the charter, was to be duly formed. The rest of the bill, however, differed widely from its prototype. The land grant, instead of being twenty sections to the mile of track, was twenty in the States of Minnesota and Oregon, and forty in the Territories; but there was no provision for a subsidy in Government bonds. Indeed, in order to remove all doubts from the minds of Congressmen as to the possible future effects of the bill, a clause was tacked on to the land grant section providing "that no money should be drawn from the treasury of the United States to aid in the construction of the said Northern Pacific Railroad."

To Perham was due a novel section which proved a dead weight on the neck of the enterprise, until it was removed in 1870, at great trouble and expense, by the passage of a bill amending the charter. This section provided "that all the people of the United States shall have the right to subscribe to the stock of the Northern Pacific Railroad Company until the whole capital named in this act of incorporation is taken up, by complying with the terms of subscription; and no mortgage or construction bonds shall ever be issued by said company, on said road, or mortgage or lien made in any way, except by the consent of the Congress of the United States." This section, advocated by Perham, the outcome of his absurd notion that a million of people were ready to subscribe a hundred dollars apiece to build any Pacific railroad, delayed the commencement of construction on the road for five years. The charter bound the company to commence work within two years, to complete not less than fifty miles a year after the second year, and to finish the entire road by July 4, 1876.

Nothing in the bill gave Josiah Perham and his associates of the People's Company control of the charter; in fact, the other corporators largely outnumbered them; but the project was generally regarded as Perham's, and there was no disposition to deprive him of an opportunity to carry it out if he could.

CHAPTER XIV.

ORGANIZING THE COMPANY.

A Board of Commissioners—The Company a New England Concern—First Meeting of the Board—Perham's Speech—His Estimate of the Cost of the Northern Pacific Road—Exaggerated Notions as to the Value of the Land Grant—Subscription Books Opened—The Original Stockholders —First Board of Directors—Officers Elected.

THE act of incorporation named one hundred and thirty-five persons as commissioners to organize the Northern Pacific Railroad Company. Doubtless a majority of these gentlemen had little knowledge of the project, and felt no particular interest in it. Their names were inserted in the list by friends in Congress as an easy way of paying them a compliment. Ex-Governors, ex-Senators and Congressmen, the then general of the army, U. S. Grant, together with a few active railroad managers and a sprinkling of capitalists swelled the list, which very properly included also the little group of New England men whose efforts at Washington had procured the passage of the charter. It was evidently intended by the promoters of the enterprise that the company should be a New England affair so far as its management was concerned. The charter provided that the first meeting of the commissioners should be held in Boston, at such time as any five of the commissioners from Massachusetts should appoint. On the first of September, 1864, the meeting was held in Melodeon Hall, Boston. Only thirty-three of the commissioners attended it. Of these fourteen were from Massachusetts, four from Maine, one from New Hampshire, one from Connecticut, two from New York, one from Pennsylvania, three from Michigan, two from Missouri, two from the District of Columbia, one from Illinois, one from Kansas, and one from Minnesota. The board elected as its officers: Josiah Perham, President; Willard Sears, Vice-President; Abiel Abbott, Secretary; I. S. Withington, Treasurer.

Mr. Perham made a speech, over sanguine, as were most of his utterances, for he was an enthusiast by nature, but showing a clear conception of the magnitude of the project and remarkably correct ideas of the character of the then little known country the proposed road was to traverse. He said the northern route was the shortest to the Pacific. Nature had made it such. Puget Sound was directly west of Lake Superior, and at the very point where the coast bends inland and carries the Pacific waters farthest east. It was also the most central route, as any one would see by looking on the map. It was also the most practicable route, for the mountain ranges, the great obstacles to any Pacific railroad, were here the most depressed and most easily overcome. There were no deserts along this route—no want of water, or timber, or stone. There was required but little heavy grading, tunneling, or trestle work, and no formidable bridging.

For farming, grazing and mining purposes, there was no parallel zone that equaled that through which this road would pass. Almost every acre was rich in soil, or still richer in mineral wealth. There was every variety of surface and scenery that could give pleasure to the eye and usefulness to the diversified employments of man. There were rich bottoms and valleys, undulating plains, rolling prairies, solitary hills and peaks, mountain spurs and ranges. There were innumerable lakes of every size and form, of the purest water. Also countless streams and majestic rivers, with rapids, cascades and falls. Forest and prairie alternated throughout, rendering the opening of farms easy and cheap. Game was abundant, and would be ample for meat until domestic animals could be introduced and multiplied to any desirable extent. The climate, too, was singularly adapted to health, activity and length of years. Free from the extremes of moisture and drought, of torrid heat and arctic cold, it was exempt from the malarial diseases that so often in other regions prostrate strength and shorten life, or render it miserable.

To a country possessing such natural advantages the railroad would not only, with astonishing rapidity, add population and wealth, but from it would receive its best income and profits. The facilities for travel would cause its corn fields and gold fields to swarm with agricultural and mining labor, while this very labor would in return fill the successive trains as they passed along. Thus the local business would grow with the road, and undoubtedly support every section of it as fast as it could be finished. But as a medium for a more extended internal and a foreign commerce, this road must command the highest consideration. From Lake Superior, westward, it would transport the trade of the Red River of the North, of the Hudson Bay Company and its dependencies, including the broad valleys of the Saskatchawan and its tributaries, and of all the regions of the Upper Missouri and Columbia. From the same points east and southward it is already connected by water or rail with all the great cities of Canada and the United States—and through the Atlantic and Gulf seaports, by steam and sail, with all the Trans-Atlantic, West Indian and South American ports. From Puget Sound, its western terminus, through the broad and deep waters of Admiralty Inlet and Fuca Straits, is the direct and nearest route to the great Pacific emporiums of Russia, China and Japan. Hence the Northern Pacific Railroad would be on the direct line of the shortest and most practicable route between Europe and the great silk and tea producing countries of Asia, as well as of the great wheat producing regions of America.

It would become the great commercial artery through which would flow the rich and varied productions of the East. Here they would be received, and, through numerous connecting branches, distributed throughout the land, thus filling our country with activity and wealth, and making our chief cities the depots and emporiums of the trade and commerce of the world. From a national point of view it would also be of the utmost importance. To the Government it would be invaluable in the transit of mails, munitions of war, and troops; to the country in the increasing facilities it would afford for travel, transportation and settlement, thus adding rapidly to its population and trade, and vastly to the value of the public domains.

Mr. Perham estimated the entire cost of the road at $120,000,000, which was not far out of the way, but when he came to talk about the value of the land grant he gave his fancy free rein. These lands he said, when the road should be built and the business fairly started, including town and station sites, would certainly average ten dollars per acre, making the sum of $473,600,000. How far beyond the mark he was in this statement may be judged from the fact that the prices of land sold by the Northern Pacific Company have ranged from four dollars an acre down, the average price never much exceeding two dollars and a half.

Mr. Perham, in conclusion, said that years of the best portion of his life and many thousands of dollars had been devoted to the accomplishment of this enterprise. "With the footsteps of time and the avidity of death, in summer's heats and winter's storms, against opposition, open and covert, jeers and sarcasms, alone, or aided only by those he employed, and the charter from the farseeing and enterprising State of Maine, the sole encouragement and foundation for his efforts, he had struggled on until a point had been reached that defied opposition and gave assurance of success."

The officers of the Board of Commissioners were directed to cause books for subscriptions to the capital stock of the Northern Pacific Railroad to be opened in Boston, Massachusetts, and Portland, Maine, and to receipt for the cash payments of ten per centum on the subscriptions required to be made by the charter. Then the meeting adjourned. The great enterprise was launched, but its progress was painfully slow for several years afterwards.

The next move in obedience to the charter was to open the subscription books. The law directed that such books should be opened " in such principal cities or other places" as a quorum of the commissioners should determine. Evidently the selection of Boston and Portland, and the exclusion of New York, Philadelphia, and other large cities was for the purpose keeping the enterprise in the hands of its projectors, until a Board of Directors could be chosen and officers elected. It was necessary that 20,000 shares of stock should be subscribed for before this could be done. This amount was exceeded by only 75 shares, the subscriptions amounting to 20,075 shares.

The following is a list of the subscribers, with the number of shares taken by each: Abiel Abbott, 800; Cyrus Aldrich, 2,000; A. W. Banfield, 200; John A. Bass, 1; Jas. M. Beckett, 1; Charles Boughten, 2,050; George Briggs, 100; Wm. L. Cavenaugh, 100; D. W. C. Clarke, 100; S. C. Fessenden, 4,000; P. J. Forristall, 200; Oliver Frost, 1; Nathaniel Greene, Jr., 5; John Hancock, 1; J. F. Howett, 100; J. H. Hersey, 100; Ogden Hall, 1; N. G. King, 1,000; A. C. King, 500; J. W. Moore, 100; C. S. Perham, 1; Josiah Perham, 10; Joseph Perham, 1; J. H. Pope, 500; Philander Reed, 2,000; Willard Sears, 2,100; L. D. M. Sweat, 1; K. B. Sewall, 1; J. S. Sewall, 1; John Toy, 2,000; E. H. Toy, 100; I. S. Withington, 2,000.

A meeting of the subscribers was held in the Merchants' Exchange, Boston, on December 6th, 1864, and a Board of Directors was elected, consisting of: Josiah Perham, I. S. Withington, A. W. Banfield, Philander Reed, Ogden Hall, Kiah B. Sewall, Willard Sears, Abiel Abbott, Nathaniel Greene, Jr., P. J. Forristall, John A. Bass, James M. Beckett, and Oliver Frost. The Directors met next day, and elected Josiah Perham, President; Philander Reed, Vice-President; Charles S. Perham, Secretary, and Increase S. Withington, Treasurer.

The Board of Commissioners now went out of existence, and the company was fully organized with officers and a Board of Directors. Nominally, at least, it had $200,750 in its treasury, from the ten per cent. payment on the stock, but it is doubtful whether any portion of this sum was ever available for the uses of the company. One of the first acts of the board was to authorize the payment of the "costs and expenses, in time and money, incurred in obtaining the company's charter." There is reason to believe that the money went back to the subscribers to the stock, and that their subscriptions were gauged in amount to correspond to the amounts of their claims against the company. Six years later, when their stock was assessed for the remaining ninety per cent., they declined to pay, and alleged that their services entitled them to the stock without further payments. The board then in control of the company thereupon confiscated the whole amount of these original subscriptions.

CHAPTER XV.

A TRANSFER OF THE FRANCHISE.

Mission of Colonel W. S. Rowland and Governor Frank Fuller to Boston—Fuller's Speech before the Board of Trade—Hamilton A. Hill's Interest—Report of a Committee Indorsing the Northern Pacific Enterprise—An International Line Proposed—Co-operation of the Railroads from Boston to Canada Secured—Perham at the End of his Resources—Transfer of the Charter—A New Organization Formed—Congress Looked to for Means to Build the Road.

LATE in the fall of 1865, Colonel Wm. S. Rowland appeared in Boston, styling himself on his cards "Commissioner of the Northern Pacific Railroad." He was, in fact, by virtue of an appointment from President Perham, subsequently confirmed by the Board of Directors, a confidential representative of the company. With him was Governor Frank Fuller, late of Utah. Fuller had been Secretary of the Territory, and for a time during the absence of the governor had performed the executive duties. The two men were good-looking, good talkers, active and enthusiastic, and could make public speeches on occasion. They had been adopted by Perham as conspicuous members of the Northern Pacific Company. They were introduced at the Board of Trade rooms in company with ex-Governor Curry, of Oregon. Rowland first explained to Hamilton A. Hill, a shipping merchant largely interested in the Canada trade, the magnificent project of a railroad to the Pacific coast. Hill took an interest in it at once. His business concerns lay in the direction of increased trade with the British Provinces, and he naturally thought the enterprise should be an international one. Rowland, who had failed to interest

New York capitalists in the project, at once fell in with Hill's idea of making Boston the Atlantic terminus, using the Canadian system of roads as far as constructed westward, persuading the Canadian Government to extend the system around Lake Superior to the Red River, and building thence to Puget Sound on American soil. Hill got a hearing before the Board for the project. A meeting was held in the Exchange, to which the leading business men of the city were invited. There was a large attendance. Ex-Governor Curry made a brief speech, and ex-Governor Fuller a long one full of effective statistics, and well seasoned with eloquent allusions to the enterprise and intelligence of Boston, calculated to gratify local pride. The meeting was enthusiastic, and was followed by a dinner at the Parker House in honor of the two ex-Governors and Colonel Rowland and the Northern Pacific scheme, at which Mayor Lincoln presided, and General Banks and other men of distinction made speeches. The project now floated on the tide of public favor. A full report of the Exchange meeting and the speeches appeared in the *Advertiser*, and there was much talk on the streets and in offices and counting-rooms about the great scheme for connecting Boston with the Pacific coast by a direct line of railroad tributary to the New England metropolis alone. Hill's next step was to move for a committee "to inquire into the plans for the construction of a railroad from the western shore of Lake Superior to the Pacific Ocean, as contemplated by the Act of Congress approved July 2, 1864, and as submitted to the Board by Colonel Rowland, and particularly to consider the bearing which the completion of this line of railroad will be likely to have upon the manufacturing and commercial prosperity of New England." The committee was appointed, and consisted of George C. Richardson, Edward S. Tobey, C. O. Whitmore, F. W. Lincoln, jr., E. B. Bigelow, Alpheus

Hardy, Hamilton A. Hill, Otis Norcross, and Avery Plumer. Every Bostonian will recognize in this list the names of several of the most eminent business men of the city. Mr. Hill wrote the report. It was signed by all the members of the committee, and read to the Board on the 24th of November. This report gave to the Northern Pacific project the first indorsement it had received since the days of Asa Whitney, from men of prominence in business affairs, who were able to back up their opinions with their checks. Perhaps it is not too much to say that it saved the project from perishing from lack of public interest.

The report made a clear, forcible presentation of facts concerning the country and climate along the northern route, and its supposed advantages for railway construction and traffic and for the development of direct trade with China and Japan. It argued that the northern route was the only one which could be shown to promise results in which New England had a positive and direct interest. "The Central and Southern routes," said the report, "will bring the Pacific States into close connection with New York, Philadelphia, Baltimore and New Orleans. But none of the commerce thus to be developed will flow near or towards New England; it will pass altogether away from the northern lakes and rivers, in the traffic of which we have a large interest, and it will not touch the Northwestern States, with the prosperity of which our citizens are intimately connected. We may, perhaps, remotely participate in the internal trade which will grow up under the improved state of inland transportation, but in the overland business—the foreign through traffic—seeking a port on the Atlantic for transmission to Europe, we can expect to have no share whatever. On the other hand, your committee believe that New England will have a positive and direct interest in the Northern Pacific Railroad, being brought into connection with it by lines now in operation, and being able to offer, by its means, superior facilities for the commerce of the Orient, which must surely, to a greater or less extent, pass over this continental line." The report then brought forward the scheme of an international line. For all purposes of inquiry, the committee said, New England and Canada might be considered as having one and the same interest. The Northern and Eastern States had a common interest with the Canadas, and *vice versâ*, in constructing a Pacific railroad which should add to the profit of the lines in existence, and make use of them as so many links in the chain of communication from ocean to ocean. The Grand Trunk Railway had been pushed to meet the waters of the central lakes. It might be extended on the north shore of Lake Superior, but, as it already connected at Sarnia and Windsor with American lines crossing Michigan and Wisconsin, it would seem more expedient to ally its interests to those lines, rather than to encounter the difficulties of construction farther north. English capital and enterprise, joined to the American land grants, would form a sound basis for the finances of the road. One northern road to the Pacific would for many years to come answer for the commerce of both countries. These sentences, taken here and there from a number of pages of the committee's report, will show the character of the plan presented to the capital and commercial interests of Boston. It meant to make the Northern Pacific a joint New England and Canadian enterprise.

About this time Sir Alexander Galt, the Canadian statesman, came down to Boston. A dinner was given him at the Union Club. Hill was an old acquaintance of his. Rowland was present. The Northern Pacific project was much talked about. Galt took a hearty interest in it, and intimated that he might be willing to accept a seat in the Board of Directors. The next step was to obtain the co-operation of the managers of the railroads leading from Boston up to the Canadian line. Hill and Rowland undertook to see President Smith and Benjamin F. Cheney, of the Vermont Central, George Stark, of the Boston and Lowell, Onslow Stearns, of the Northern Railroad, which connected those two roads, and Judge Rice, of the Maine Central.

A number of interviews were had with these gentlemen in Boston. At some of them Perham was present with a few of his Directors. Perham frankly admitted that he could not go on with the enterprise. His plan of raising money by a popular subscription to interest-bearing stock had proved a dead failure. The company's treasury was empty, and it had no credit. Rowland's salary and those of the clerks in the New York office had not been paid, and the rent was in arrears. Perham was constantly pressed to redeem the obligations he had given out freely at Washington when the charter act was pending in Congress. He had come to the end of the means or the willingness of the few men of capital whom he had drawn into the enterprise. Disheartened and nervously exhausted, he felt that he must give up the struggle. He told the Boston men that if provision were made immediately to meet passing claims upon him, and at an early day to pay all the expenses he had incurred in obtaining the charter, he would transfer the franchise and step out.

Perham called a meeting of the Board at the Merchants' Exchange in Boston. The meeting was held on December 12th, 1865, and Messrs. Briggs, Sears and Fessenden were appointed a committee "to confer with certain persons in Boston relative to placing the affairs and management of the company upon a more solid and permanent financial basis, in order to insure the speedy construction of the road." At the Parker House that evening there was another meeting, and next day still another. Then it was resolved, "that, in consideration of the faith of certain gentlemen in Boston, with whom our committee have been in conference, being pledged to use their influence to their utmost to secure subscriptions to the stock of the Northern Pacific Railroad to the amount of $150,000,000, and to the acknowledgment of the issue of $600,000 worth of stock, whenever said subscribers, or any of them, shall become Directors in said Northern Pacific Railroad, we, the Directors of said Northern Pacific Railroad, do agree, whenever said gentlemen shall affirm their readiness to subscribe to said stock, to resign in our Board of Directors to the number of eleven or twelve Directors of the Northern Pacific Railroad to the aforesaid gentlemen of Boston." Messrs. Briggs, Sears and Emery were appointed a committee to negotiate for the transfer of the control of the franchise of the company. They reported the same day that the conditions of the transfer had been agreed to. Next day Hamilton A. Hill was made a Director in place of B. S. Adams, who resigned to give the Boston men immediate representation in the Board. The claims against the old organization were then audited by a committee, and an issue of stock authorized to pay them, and this business being disposed of, eight more Directors resigned. They were Messrs. F. W. Manson, Nathaniel Greene, Jr., Willard Sears, Abiel Abbott, F. W. Emery, Ogden Hall, James M. Beckett, and Josiah Perham. Their places were filled by the election of John Gregory Smith, of Vermont, George Stark, of New Hampshire, Onslow Stearns, of New Hampshire, Frank Fuller, of New York, Benjamin P. Cheney, of Massachusetts, George H. Gordon, of Massachusetts, James C. Converse, of Massachusetts, and William S. Rowland, of New York. Other changes soon followed. R. D. Rice, of Maine, and

Joseph Clarke, of Vermont, being elected new members.

The new board contained not a single member of the original Perham board, and no one remained who had served at any time with Perham except L. D. M. Sweat, of Maine. John Gregory Smith was elected President, and Frank Fuller Vice-President. Mr. Fuller resigned a few months later and was replaced by Phineas S. Fisk, and Mr. Rowland made way for Geo. E. Richardson. Chas. S. Perham's place as Secretary was taken by Hamilton Hill.

The new organization was strong in its personality and in the capital it represented. Messrs. Smith, Stark, Rice, and Stearns controlled several of the most important railroads in New England. Mr. Cheney was the proprietor of Cheney's Express, and was largely interested in railroads. Messrs. Converse, Richardson, and Hill were influential business men. Mr. Gordon had served in the army as a general officer, and was expected to be useful in directing the engineering department of the road. A better organization for prestige and force could hardly have been found in New England. It was weak, however, in the fact that it was so exclusively a New England concern. The new directors did not expect to put money into the Northern Pacific enterprise to the extent of building any portion of the road. They only agreed to pay the debts of the Perham organization. Their hope was to get money by the help of Congress, to which body they immediately appealed for aid. It should be said, however, in their behalf, that in 1866, it was absolutely impossible to raise money by stock subscriptions or the sale of bonds not indorsed by the Government, to build a railroad to the Pacific. The Union and Central companies had great difficulty in obtaining funds even on a first mortgage, although the Government furnished them, on a second lien, bonds sufficient to pay the major part of the cost of their lines. The stock put out to pay Perham's debts and claims had no standing in the market. Under these circumstances, Smith and his associates looked to Congress as the only power which could save the Northern Pacific Company from speedy demise.

Josiah Perham died in 1868, at the house of his son, in Boston. His last days were embittered by the reflection that he had spent many years of his life in an enterprise which he could not carry forward to fruition, and which others had taken out of his hands, leaving him no results from his labors in its behalf. The money he received from the new organization of the Northern Pacific Company hardly sufficed to pay his debts, and the stock he received could not be sold. After his death it was redeemed at the rate of twenty-five cents to the dollar. Like Asa Whitney, the projector of the Northern Pacific Railroad, Perham, its first president, died in poverty.

CHAPTER XVI.

APPEALS TO CONGRESS.

J. Gregory Smith's Early Career—His Plan for Co-operation with the Canada Pacific Company—Movement for an Extension of Time—Opposition in Congress to all Land Grant Railroads—Thaddeus Stevens' Assistance—Two more Years Allowed for Beginning Work—Effort to Secure Government Aid—A Discouraging Outlook—A Guaranty of Interest on Stock Asked—Defeat of the Guaranty Bill in the House—Attempt to Revive the Bill in the Senate—An Indirect Defeat by a Majority of One—A Blessing in Disguise.

J. GREGORY SMITH, who now came into the control as President of the Northern Pacific Railroad Company, was born at St. Albans, Vermont, in 1818. He graduated at the University of Vermont, and studied law at the Law School in New Haven, which he left in 1841 to go into practice with his father. He continued at the bar until 1855, when he retired from general practice, retaining the attorneyship of the Vermont Central Railroad, of which corporation his father was trustee. When his father died, in 1858, he succeeded him as trustee of the road. In 1858 he was elected to the State Senate, and again in 1859. He served in the Vermont House from 1860 until 1862, and was Speaker in the latter year. In 1861 he was Chairman of the State Republican Committee, and in 1863 was elected Governor, a re-election following in 1864. He held the office until October, 1865. The urgency of the Boston gentlemen who had undertaken to relieve Josiah Perham of the Northern Pacific franchise and pay his debts brought Mr. Smith into the new organization, and the presidency naturally fell to him, as a practical railroad man. He did not approve of the Boston scheme for an alliance with the Grand Trunk Railroad of Canada. His plan was to aid the Canada Pacific Company, just chartered, by subscriptions of American capital, secure from it the building of a line from Montreal to the Sault Sainte Marie, and thence through the Upper Peninsula of Michigan to connect with the Northern Pacific at the Wisconsin boundary; the line across Michigan from the Sault to be leased by the Northern Pacific Company. This plan would have made Boston the seaboard terminus of the Northern Pacific, and the Vermont Central one of the links in its line to the east. Sir Hugh Allan, who was at the head of the Canadian company, approved the plan and held numerous conferences with Gov. Smith. The fall of the McDonald ministry carried with it the Canada Pacific scheme as then organized, and also the Boston plan for an international line across the continent and a tide-water terminus on Massachusetts Bay.

The first and most pressing thing before the new Board of Directors was to obtain from Congress, if possible, an extension of the time prescribed for beginning work. The charter act directed that the company should commence work within two years from the approval of the act by the President. The date of approval was July 2, 1864; consequently the time allowed for beginning construction expired July 2, 1866. It was already January, 1866, when the Perham party turned over their seats on the Board to the Smith organization. The company had no existence except on paper and by virtue of its franchise. It consisted, in fact, of a few hopeful gentlemen who had clubbed together to take the franchise off Perham's hands and pay him and his associates $102,000 to reimburse them for the expenses they had incurred in organizing the company. There was no money on hand to begin building the road, and no plan had been matured to raise funds. The only definite idea of the new directors seems to have been to fall back upon Congress for a grant of Government aid. No surveys had been made, and there was no place even where construction could begin for the sake of a formal compliance with the charter.

Perham had already set on foot an effort at Washington to bridge over the first difficulty by obtaining an extension of time. He had sent Colonel W. S. Rowland as commissioner, and had been there himself. Rowland was an impecunious, plausible, self-important person, always in debt and always on the point, in his own opinion, of floating some scheme with "millions in it." He attached himself to the Northern Pacific project in its early stages. He had considerable organizing talent, however, was energetic and intelligent, and the new Board made him a director, and continued him as commissioner at Washington, wishing to bring to bear all the influence it could command to push the extension bill through. The task was by no means an easy one. Hostility to all land grants had begun to be a popular cry. Besides, the Northern Pacific scheme, as we have seen, had almost no local strength outside of New England and Minnesota. For a while the case looked desperate. Smith and Rowland rallied the friends of the enterprise, but they were few in number. It was saved from destruction by the powerful aid of Thaddeus Stevens, of Pennsylvania, then the leader of the House—a man who for ten years wielded an influence in Congress scarcely paralleled in the history of legislative bodies. A land-grant road, known as the Union Pacific, Eastern Division, which afterwards became the Kansas Pacific, was at the same time seeking an extension. It had powerful backers, among them Colonel Thomas A. Scott, of the Pennsylvania Railroad. The Northern Pacific people wanted to join forces with Scott and his associates, but Scott felt sure of getting his bill through without additional help, and, thinking an alliance dangerous, declined. When Stevens heard how the case stood he said he would look after the Northern Pacific. A day was set for the consideration of the Union Pacific Eastern Division bill, and when it arrived its friends were on hand in full force. Mr. Stevens, who could always get the floor when he wanted it, rose and moved an amendment in the form of an additional section providing "that the time for commencing and completing the Northern Pacific Railroad and all its several sections is extended for the term of two years." The Scott party did not dare oppose the amendment for fear of hazarding the passage of their own extension measure; so the bill passed, and the first danger of the forfeiture of the Northern Pacific franchise was bridged over.

An effort to secure financial aid for the Northern Pacific enterprise ran parallel in Congress with that to obtain an extension of time for beginning work, in the session of 1866. The company opened an office in Washington, pamphlets were printed presenting its claims to Congressional favor, newspaper articles were published, a number of the Directors appeared in the committee rooms of the capitol, the President and Secretary went back and forth, resolutions were adopted by sundry Boards of Trade and Chambers of Commerce indorsing the application of the company—in short, all the machinery of a well-equipped movement to influence Congress was set in motion.

It is easy now to look back in the light of nearly a score of years of experience in the relations of railways to the government and criticise this effort of the Northern Pacific managers as unwise; but at the time what they did seemed the most reasonable and business-like thing for them to do. They had satisfied themselves that a railroad to the Pacific coast could not be built with stock subscriptions in the ordinary way, as an ordinary business enterprise. They were not allowed by their charter to issue bonds, and if they had enjoyed that privilege, first obtained four years later, they could not at that time have found a market for their securities. The land grant did not afford a sufficient basis of credit, because the land grant railroads in the nearer regions of Iowa, Missouri, Nebraska, and Kansas, had millions of fertile acres upon the market, and no inducements could then be presented to persuade settlers to go beyond the forest belt of Minnesota to the unknown plains of Northern Dakota. In short, the value of the land-grant was all in the future, and capitalists would not lend money upon it. Besides, the Northern Pacific Company had the example of the two companies just chartered to build the Central line across the continent to California. Those corporations never dreamed of constructing a road through the most uninhabited spaces and over the lofty mountain ranges in the interior of the continent with a land grant alone. They had obtained, at the outset, a loan of United States bonds amounting to an average of about $32,000 per mile. Not satisfied with this heavy subsidy, they came to Washington in 1864, the year the Northern Pacific charter was granted, and asked and got from Congress the right to put a first mortgage upon their roads to the full amount of the government loan, and to subordinate the government's lien to the position of a second mortgage.

What the Northern Pacific asked for and did not get was modest compared with the generous bounty accorded to the Union and Central Pacific companies. It asked a guaranty from the United States Government that it would for a period of not more than twenty years pay interest at the rate of six per cent. on the company's stock to the average amount of $31,000 per mile, or $57,000,000 in all. The company was to relieve the Government of the whole or part of this burden as soon as it could from its net earnings, and it was to surrender to the Government the proceeds of the sales of all lands in its grant lying on the south side of its track. This proposition seemed fair and reasonable to many of the leading men in both Houses of Congress. It failed of passage when put in the form of a bill, from two causes: first, the organized opposition of the Union and Central Pacific corporations and their friends in Congress, who were naturally hostile, from motives of self-interest, to the construction of a second line to the Pacific coast; and second, from the influence of a growing public sentiment against Congressional grants or subsidies to railroads in the West.

The bill to aid the Company, entitled, "A Bill to Secure the Speedy Construction of the Northern Pacific Railroad and Telegraph Line, and to Secure to the Government the Use of the same for Postal, Military, and other Purposes," was reported to the House by Mr. Price, of the Committee on the Pacific Railroad, April 24, 1866, and occasioned an animated debate lasting three days. The opponents of the bill asserted that if it became a law, it would take fifty or sixty millions of dollars from the public treasury which would never be recovered; its friends insisted that the advances of interest on the stock would all be repaid soon after the completion of the road. The extravagant estimates of the value of the land grant printed and circulated by the company when it was engaged in the futile effort to sell its stock, were the most effectual weapons in the hands of the opposition to the bill. Among the company's advocates of the measure were Thaddeus Stevens, of Pennsylvania, then the leader of the Republican side of the House; Wm. D. Kelley, of Pennsylvania, an early friend of the Northern Pacific enterprise; John A. Bingham, of Ohio, now Minister to Japan; William Windom, of Minnesota, afterward Senator, Secretary of the Treasury, and again Senator. The leaders of the opposition were Samuel Randall, of Pennsylvania, afterward Speaker of the House; Columbus Delano, of Ohio, who was later a member of President Grant's Cabinet; John F. Farnsworth, of Illinois, and R. P. Spalding, of Ohio. The bill was finally tabled on April 27th, on motion of Mr. Spalding, by a vote of yeas, 76; nays, 56; not voting, 51.

The friends of the Northern Pacific were somewhat disheartened by this defeat, but they determined to go to the Senate, in the hope that the bill could be got through that body, and that the House would look upon it more favorably if it came with the Senate's indorsement, and that a majority could be secured for its passage before the close of the session or at the ensuing short session of 1866-7. The Senate Committee favored the bill, and its chairman, Mr. Howard, of Michigan, brought it up for consideration on the 14th of July. It was sharply attacked by Mr. Sherman, of Ohio, who asserted that it would cost the Government $120,000,000, and argued that Congress, in giving the company double the land grant per mile given to another road, had been sufficiently generous. He was supported by Mr. Fessenden, of Maine, who then wielded great influence in the Senate. Conspicuous advocates of the bill, besides Mr. Howard, were Mr. Williams, of Oregon, Mr. Cragin, of New Hampshire, and Mr. Ramsey of Minnesota. The session was too far spent for a thorough consideration of the measure, and it was practically defeated on the 16th by a recommittal to the Committee reporting it—the vote being, yeas, 20; nays, 19.

In effect, this adverse majority of one disposed of the whole scheme of building the road with financial aid from the Government. Renewed effort was made at subsequent sessions, as we shall see in other chapters, to revive the rejected bill, but the temper of Congress was evidently less favorable than before, and no progress was made. The failure of the bill looked at the time like a serious and perhaps fatal disaster to the Northern Pacific enterprise. In the end, however, it turned out to be a benefit, for the affairs of the company were at last put upon a much sounder financial basis than would have been possible had they been involved in the entanglement of a government loan. In view of the experience of the railroads constructed with government subsidies, there can be no question that the debt of the Northern Pacific on its completion will be considerably less than it would have been if Congress had consented to loan the company the credit of the nation and to indorse its interest obligations.

CHAPTER XVII.

THE ORIGINAL INTERESTS AGREEMENT.

Weakness of the Northern Pacific as a purely New England Enterprise—Gov. Smith's Plan to Nationalize the Company—A Railroad Syndicate Proposed—William B. Ogden Agrees to Join it—The Original Interests Agreement Formed—Twelve Shares Provided for—Edwin F. Johnson Appointed Chief Engineer—Surveys Ordered.

THE experience of President Smith in Washington during the winters of 1866 and 1867 convinced him that his organization lacked breadth. It was too purely a down-east affair to command the strength in Congress necessary for the passage of any measure for giving it the financial support of the Government. Something had to be done to widen the area of its influence if the enterprise was to be kept alive. Besides, some of the Boston gentlemen associated with him had become alarmed at an attack made in Congress upon the company by "Long John" Wentworth, of Chicago, on account of the plan for a Canada connection to the seaboard, and being besides greatly annoyed by claims for services and influence alleged to have been given Mr. Perham at Washington, were eager to step out. In this situation of affairs, Mr. Smith conceived the plan of a great railroad syndicate embracing many of the leading roads in the country. To assist in carrying out this plan he enlisted Thomas H. Canfield, of Burlington, Vermont, an early advocate of the Northern Pacific project. Canfield was energetic and fertile in resources. It was agreed that an effort should be made to secure the interest and influence of the New York Central, the Erie, the Pennsylvania, the Pittsburgh, Fort Wayne & Chicago, the Chicago & Northwestern and other lines. Some of the New England directors were ready to resign, and it was manifestly out of the question to push the great enterprise forward on the narrow basis of exclusive New England support. Gov. Smith was too busy with the pressing affairs of his Vermont Central Railroad to give much help himself to the new plan, but he had great confidence in Canfield, and told him he would back him up in whatever he did.

Mr. Canfield's first step was to get the Northern Pacific Charter Act printed in a pamphlet. He then went to New York and broached the proposition of transferring the management to William B. Ogden, President of the Chicago and Northwestern Railroad, feeling that if he could secure his support there would be slight difficulty in persuading the other men whom he had in mind. Ogden appointed an evening a week ahead, at his home, called Boscobel, near High Bridge, where Canfield succeeded so well in interesting him in the project that the two talked about it from nine o'clock in the forenoon till midnight. Ogden was an enthusiast on the subject of the development of the Northwest. No man in his time was better informed upon the resources of that section. He could talk eloquently by the hour about its marvellous growth and its great future. Of all the great railway managers of that day he was the one whose indorsement and active support was of most value to the struggling, feeble Northern Pacific scheme. It was agreed that night that Gov. Smith should be telegraphed for. He came down from Vermont, met Canfield and Ogden at the latter's office, on the evening of January 10, 1867. A financial plan was discussed and drawn up, which afterwards became known in the affairs of the company as the Original Interests Agreement. As a basis for this agreement, Smith made a statement of the amount of money he and his associates had expended in the payment of Perham's debts, incurred in procuring the charter, and in keeping the company alive. It amounted to $102,000. Besides this sum they had issued certificates of indebtedness for $100,000, and had agreed to recognize the $600,000 of stock issued by the Perham party. It was provided in the Original Interests Agreement that the enterprise should be divided into twelve shares, each to be valued at $8,500, or one-twelfth of the $102,000 already expended by Smith and his associates. Each subscriber to the agreement was to "come in on the ground floor," as the phrase goes among financiers, paying for his interest only $8,500 for a twelfth share, and having a joint interest with Smith and his associates, according to the number of shares or parts of shares he took. It was agreed by the subscribers that the best efforts of each and all should be given to obtain from Congress the passage of a bill granting aid to the company for the construction of its road, and for such further legislation as might be needed, and that each should contribute, according to the interest which he held, the necessary funds for that purpose. In this last clause lay the kernel of the whole matter. The subscribers were not supposed to be acquiring anything of positive value in return for their $102,000; they were, in fact, binding themselves to put their hands in their pockets from time to time and pay for indefinite expenses to be incurred to give the franchise vitality and future worth. Probably there was not a man among those who subsequently signed this agreement who felt confident at the time that he had an even chance of getting his money back.

It was further stipulated in the agreement that each of the twelve shares should be entitled to one director in the company, the thirteenth director being reserved by general understanding for the Pacific coast, and that each party to the agreement might subdivide his interest according to his own choice; the subdivision and addition of new parties should not, however, change the manner of representation in the Board.

It was late in the evening before the terms of the agreement were fully planned and put upon paper. There was no gas in the office, and candles were sent for. At last, when the document was ready, Mr. Ogden said: "Well, gentlemen, is there anything else to do?" "Yes, there is one thing more," said Mr. Canfield, "and that is, for you to put your name to the paper for one of the one-twelfth interests." Ogden signed his name, and Smith and Canfield left him to walk up Broadway together. As they passed Trinity church, Gov. Smith said that he felt that a critical turning-point in the Northern Pacific enterprise had been passed. Mr. Canfield soon afterwards obtained the signatures of Robert Berdell, President of the Erie Railway, Wm. G. Fargo, Vice-President of the New York Central Railway, D. N. Barney, B. P. Cheney, and A. H. Barney, who, with Fargo, had large express company interests, Edward Reilly, a friend of Thaddeus Stevens, of Pennsylvania, G. W. Cass, President of the Pittsburgh, Fort Wayne and Chicago Railroad, and J. Edgar Thompson, President of the Pennsylvania Railroad.

On the 31st of the following July, the "Original Interests Agreement" was modified so as to limit the amount to be assessed upon each share for expenses to $12,500, including payments already made, unless unanimous consent was given to the assessment of a larger amount. There was some redistribution of interests made, and the signatures, with the number of shares or parts of shares held by each subscriber, were as follows: J. Gregory Smith, for self and associates, 4⅔ shares; W. B. Ogden, 1⅓ shares; Robert H. Berdell, 1 share; D. N. Barney and B. P. Cheney, 1 share jointly; A. H. Barney and W.

G. Fargo, 1 share jointly; G. W. Cass, 1 share; J. Edgar Thompson, for self and associates, 1 share; Edward Reilly, 1 share. This arrangement disposed of all the twelve shares.

On the 16th of May, 1867, six members of the Board of Directors, Messrs. Gordon, Clarke, Briggs, Richardson, Fisk and Stark, resigned to make room for the holders of original interests, according to the terms of the agreement detailed above, and their places were filled by the election of Messrs. Ogden, Thompson, Cass, Berdell, Canfield and Fargo.

The new board appointed Edwin F. Johnson Chief Engineer, and ordered him, under direction of the President, to commence surveys and locate a line between Lake Superior and the Red River of the North; also to explore the western end of Lake Superior, with a view to the location of the Eastern terminus of the road. He was further instructed to locate the line from Portland toward Lake Pend d'Oreille, to make a reconnoissance of the country between the waters connected with the Straits of Juan de Fuca and the Columbia River, and thence eastwardly towards the eastern base of the Rocky Mountains, to make a measurement of the practicable passes in the Cascade Range, and to report the result of such surveys before the 15th of November. A committee, composed of President Smith, A. H. Barney, A. S. Diven and Thos. H. Canfield, was appointed to collect $25,000 to pay the expenses of the surveys and to defray the incidental expenses of the Company. Thos. H. Canfield was appointed General Agent in New York to collect assessments, make disbursements, and attend generally to the business of the company. The subscribers to the twelve original interests agreement continued to make advances for the cost of surveys and the current expenses of the company, until they had furnished in the aggregate about a quarter of a million of dollars.

In the following December an executive committee, consisting of the President and Messrs. Ogden, Thompson, Cass, Fargo, Rice and Stearns, was appointed, and charged by resolution with the duty of presenting a proposed amendment of the charter of the company to Congress, authorizing the issue of bonds, and to raise such sums of money as might be necessary to meet the incidental expenses connected therewith.

At last the enterprise seemed to have been put upon its feet. Its managers were among the foremost railroad men in the country. They had the respect of the public and the confidence of capitalists. They had not yet determined, however, to abandon the impracticable scheme of securing a subsidy in bonds or in the form of a guaranty of interest from Congress, and instead to place the project upon a business footing based on the traffic the road would develop when built, and the value of the magnificent land grant given it by Congress—a grant double the extent of that given to the companies chartered to build to the Pacific by the Middle and Southern routes. Indeed, the object of the surveys described in the following chapter was not to prepare the way for early construction so much as to strengthen the company at Washington, and the remarkable alliance of railway men represented in the Board of Directors was not formed to give strength to a loan or an issue of stock, but rather to bring influence to bear upon Congress. The weakness of the Northern Pacific enterprise in these early stages was this persistent leaning upon the Government for help. The temper of Congress and the country was adverse to further favors to land-grant roads, and efforts to pass bills in face of this hostile spirit were thrown away. If the time, labor and money spent at Washington between 1866 and 1870 by the managers of the Northern Pacific had been devoted to a sound financial scheme for building the road, it would have been completed earlier and many troubles and much needless expense would have been saved.

CHAPTER XVIII.

SURVEYING THE LINE.

Chief Engineer Johnson's First Report—A Preliminary Location Made in 1867—First Estimates of Cost—Two Surveys Across Minnesota—Choice of a Lake Harbor—Routes Across the Cascade Mountains Examined—W. Milnor Roberts' reconnoissance in 1869—Gov. Marshall's Expedition to the Upper Missouri—The Rocky Mountain Passes—Advantages of the Bend d'Oreille Route over the Clearwater Route—A Final Survey of the Bitter Root Mountains.

EDWIN F. JOHNSON, appointed Chief Engineer of the Northern Pacific Railroad Company in May, 1866, presented his first general report to the Board of Directors in November, 1867. At that time surveys in Minnesota and in Washington Territory were in progress, but full reports from them had not been received. Mr. Johnson was able, however, to prepare a map showing a preliminary location of the entire line from Lake Superior to Puget Sound. The map indicated two routes across Minnesota; one starting from Superior City and running to the Red River by way of the Crow Wing River and the Otter Tail Lakes; the other beginning at Bayfield and bending off to the south so as to cross the Mississippi at Sauk Rapids, and thence running northwest to Breckenridge on the Red River. The two lines converged at the bend of the Cheyenne River in Dakota. Both of these lines crossed the Red River at points considerably south of the crossing afterward adopted within the site of the present towns of Moorhead and Fargo. The line across Dakota crossed the Missouri near Fort Clark, about thirty miles north of the present town of Bismarck, and thence ran west to the Yellowstone, which it crossed not far from the mouth of Glendive Creek. Instead of following up the valley of the Yellowstone, as does the completed road, this projected line was run on the high plateau, north of the river, and bending to the northwest at a point about twenty miles north of the mouth of the Big Horn River, passed between the Judith and Belt Mountains to the great falls of the Missouri, where it crossed that river. A short branch was indicated to Big Horn City and another to Fort Benton. The line ran through the Gate of the Mountains and up the Missouri and the Dearborn rivers to Cadotte's Pass, in the Rocky Mountains. On the western side of the Mountains the route was about the same as that subsequently adopted, following down the Hell Gate River, crossing to the Jocko, and descending that stream and the Clarke's Fork of the Columbia to Lake Pend d'Oreille, from whence it ran straight to the mouth of the Snake River. The route to Puget Sound was by way of the Valley of the Yakima and the Snoqualmie Pass to Seattle.

This line was largely a theoretical one, and was based chiefly on the reports of the Government Pacific Railroad expedition under Governor Stevens and that of Captain Reynolds which surveyed the Yellowstone Valley in 1859 and 1860. It differed from the line indicated in an earlier map prepared when the bill chartering the company was before Congress, in crossing from the Missouri to the Yellowstone, instead of following the north bank of the Missouri up to the Great Falls as Stevens had recommended. Mr. Johnson's report displayed a knowledge of the country the road was to traverse and the engineering difficulties to be surmounted, which was remarkably thorough. He had seen no part of the route, but he had so carefully studied all the available sources of information, that his report can be read with interest at this day as a fairly accurate description of the region. Mr. Johnson estimated the length of the road, from the head of Lake Superior to Puget Sound, at 1,755 miles, and to Portland at 1,775 miles. He made detailed estimates of cost aggregating $140,377,500 for the road and its equipment to Puget Sound, and $16,480,000 for the Oregon branch to Portland, the average cost per mile being $79,-421. In these figures he did not include the general expenses of management, interest upon loans, or discount upon bonds. He dealt only with the question of construction and equipment.

Systematic surveys on both ends of the road were begun in the summer of 1867 under Mr. Johnson's general directions. In Minnesota two lines marked out by him were run by Gen. Ira Spaulding and his assistants, W. H. Ruggles and Col. W. H. Owen. One, called the Crow Wing Line, started at Superior Bay, and running north of Mille Lac and south of Gull Lake, crossed the Crow Wing River about sixteen miles northwest of its junction with the Mississippi, and passing near the foot of the Otter Tail Lake, struck the Red River five miles north of the Sioux Wood River.

The St. Cloud line commenced at Bayfield on Lake Superior and bore off southwest to St. Cloud, whence it ran to a point on the Red River six miles south of the other line. The distance from Superior to the Red River by the Crow Wing line was 232 miles; from Superior to the State line at Sioux Wood River it was 268 miles. The question of the best point for the eastern terminus on Lake Superior was then an unsettled one, and lines were surveyed from Duluth and Pleasant Bay, 13 miles from Bayfield, as well as from Superior. The Crow Wing line from Superior was estimated to cost $2,878 less per mile to build than the St. Cloud line, provided the latter started from Pleasant Bay, and the total difference of cost was placed at $3,848,500.

In favor of the Southern or St. Cloud line was the fact that much of it traversed a rich, cultivated country, and that a St. Paul connection would be easier to secure at St. Cloud than at a point further north where the other route would cross the Mississippi. The engineers reported, however, that these advantages would be in a great measure neutralized by the increased cost of the road, and by the fact that all freights must incur the cost of about 60 to 77 miles more of railway transportation than if placed on shipboard at the head of the lake, in case the St. Cloud line should start from Pleasant Bay.

The search for a good harbor for a lake terminus was confined to three points—Chegwamigon Bay and the Lake Shore behind the Apostle Islands; Superior Bay at Superior City, Wisconsin, and Superior Bay at Duluth, Minnesota.

On the Pacific coast the surveys were placed in charge of Gen. James Tilton, formerly Surveyor General of Washington Territory, with instructions to obtain definite information as to the number and elevation of the Passes practicable for a railway over the Cascade range of mountains in that territory between the Columbia River and Puget Sound, and, if time and means permitted, to extend a line of survey up the Columbia River valley from near Portland, in Oregon.

Gen. Tilton arrived at Olympia, Washington Territory, on the 28th of July, 1867, and dispatched two parties under the charge of J. S. Hurd and W. H. Carlton to explore the Snoqualmie and Cowlitz Passes of the Cascade Range. The surveys made by these parties, and a third one subsequently organized under the charge of A. J. Treadway, disclosed several practicable passes in that range, the most eligible of which Gen. Tilton reported to be the Cowlitz, the Snoqualmie, and the Wenachee or the Skagit, situated in the order named, the Cowlitz being the most southerly. "This latter pass," said Gen. Tilton in his report, "leads from the Tanum branch of the Nachess River, a tributary of the Yakima, to the Cowlitz River, and is about twelve miles to the southeast of Mount Ranier. The second pass leads from the Kitchelus branch of the Yakima to the Snoqualmie branch of the Snohomish River, and is about 40 miles north of Mount Ranier, and the third pass leads from the Wenachee, a tributary of the Columbia River, in one direction to the Skykomish branch of the Snohomish River, and in another and northerly direction to the Sawk branch of the Skagit River Between the Snoqualmie Pass and Mount Ranier are two Passes, the Cedar River or Yakima, and the Nachess, elevated, the former 1,060 feet, and the latter 1,900 feet above the Snoqualmie Pass." Through this latter pass was built the military road from Puget Sound to the Columbia River.

No action was taken upon these surveys at the time. The money to pay for them was raised, not without difficulty, by a committee of the Board of Directors composed of President Smith, A. H. Barney, A. S. Diven, and Thomas H. Canfield. The company was then endeavoring to secure a grant of money or credit from Congress, and had no resources to commence the construction of the road. It was not until April, 1869, that the reports of General Spaulding and General Tilton were placed before the Board by the Chief Engineer. That officer, making a report accompanying those of the actual surveys, said:

> "In commencing the construction of the road, there are particular portions which, in view of the benefit and convenience to the company and the public, should be first built. In Washington Territory, the line from the Columbia River to Puget Sound should be first constructed, to accommodate the business of that section and facilitate access to and the speedy sale and settlement of the company's lands on each side of the sound, the demand for which will be greatly increased on the completion of the Union and

Central Pacific Railroad. In Montana, an early connection of the navigable waters of the Missouri with those of the Columbia is required, to meet the wants of a large population already gathered and increasing in the mountain portion of that Territory, and to develop its great mineral and agricultural resources.

"The building of the road through Minnesota, to meet the business wants of that State, and of a large and increasing population to the north and west of it, should not be delayed, and its extension west of the Missouri River, giving, in connection with the navigation of that river, steam communication between the lakes and the settled portions of Montana, is also of first importance. This line from Lake Superior to the Missouri River should take precedence of the line in Montana, being needed for the transport of materials and men for the work in Montana, and needed also for the more rapid sale and settlement of the company's lands in Minnesota, Dakota, and Montana.

The surveys of Governor Stevens had established the fact that there were several practicable passes in the Rocky Mountains through which a railroad could be built with ordinary mountain grades, by the help of summit tunnels of moderate length. The selection of one of these passes was left to await more careful examination in the following years, and the more definite location of the road on either side of the great water-shed.

The banking firm of Jay Cooke & Co. was proffered the financial agency of the Northern Pacific Railroad, in 1869. But they delayed a definite decision upon the offer until an examination of the route of the road and the character of the country traversed could be made by agents sent out by themselves, in whose reports they could place confidence. In pursuance of this arrangement, the firm sent two parties into the field in the summer of that year. One, in charge of W. Milnor Roberts, afterwards Chief Engineer of the company, was directed to proceed to the Pacific coast, examine Puget Sound and the Columbia River—the two western termini of the road—and then go eastward, either over the Cascade Mountains through the Snoqualmie Pass, or up the Columbia to the great plain of the Columbia, and to the passes of the Rocky Mountains, the Upper Missouri country and the waters of the Yellowstone. The other party, under Governor Marshall, of Minnesota, undertook to explore the already well-known route from Lake Superior to the Red River of the North, and across the wild Dakota plains to the Great Bend of the Missouri. Both parties were to report on the value of the country for settlement, and the Pacific coast party were to study engineering problems so far as to be able to make an estimate of the cost of construction on the mountain divisions of the line, which alone offered any serious obstacles to railway building. The surveys of General Tilton, in 1867, had, as we have seen, included the Cowlitz River route from the Columbia to the Sound, the shores of the Sound, and the passes of the Cascade Range, but had not been pushed farther eastward than that range.

The Pacific coast party was made up of W. Milnor Roberts, Thos. H. Canfield, General Agent of the Company; Samuel Wilkeson, the Company's Secretary; the Rev. Mr. Claxton, Wm. G. Moorehead, Jr., and Mr. Johnson, a son of Edwin F. Johnson, the Chief Engineer. These gentlemen visited all the little towns and saw-mill ports on Puget Sound, and then returning to Portland went up the Columbia to Wallula, and thence by road to Walla Walla, already a thriving place. There they fitted out a horseback expedition, consisting of eight pack mules and ten saddle-horses, and traveling about twenty-four miles a day, crossed the rolling, grassy plains, then quite destitute of population, but now dotted with farms and villages, to Pend d'Oreille Lake. A small steamer was already running on the lake, carrying miners and prospectors on their way to the Kootenai country. The party traveled the old Hudson Bay Company trail from the head of the lake up the Clarke's Fork, the route afterward selected for the railroad. They followed the Flathead and Jocko rivers, and crossed by the Coriacan Defile to the Hell Gate River, finding at Missoula a small and hopeful town, and at Deer Lodge an active trading center. The Deer Lodge, Mullan and Cadotte's Passes, in the Rocky Mountains, were examined, Helena visited, and the Missouri Valley descended to Fort Benton. Returning to Helena, the party went south to Bozeman, and crossed the Bozeman Pass to the Yellowstone River. It had been their intention to go down the Yellowstone Valley, but the hostile attitude of the Indians in that region caused them to turn back to Bozeman. They then traveled southward over the stage road to Corinne, in Utah, on the Union Pacific Railroad. Their failure to penetrate the valley of the Yellowstone was not detrimental to the general objects of the reconnoissance, inasmuch as General Hancock, with a military expedition, had explored that portion of the river in the previous year. His report appeared soon after, and gave all the needed information as to the character of the country and its adaptability for railroad operations.

The results of the Roberts-Canfield-Wilkeson exploration were embodied in three publications—a report by Mr. Roberts, giving special attention to engineering features; a pamphlet by Mr. Wilkeson, entitled "Wilkeson's Notes," devoted chiefly to a thorough description of the lumber and coal resources of the Puget Sound country and the fisheries; and a report by Mr. Canfield, giving a full account of the Sound harbors, and their respective merits for a terminal city for the railroad, and also descriptions of the passes of the Bitter Root and Rocky Mountains. Mr. Roberts made a detailed estimate of the cost of building and equipping the entire line from Lake Superior to Puget Sound, the total being $85,277,000, or an average of $42,638 per mile.

Gov. Marshall's party included J. Gregory Smith, the President, and R. D. Rice, the Vice-President of the Northern Pacific Company; Frederick Woodbridge and Worthington C. Smith, members of Congress from Vermont; C. C. Coffin, the journalist and author, who wrote a book about the journey; the Rev. Dr. Lord, and Dr. Thayer, of Vermont; George Brackett, of Minneapolis; Mr. Holmes representing Jay Cooke & Co., and Mr. Bayless, who represented certain New York capitalists. After leaving St. Cloud the expedition followed the Red River trail. They found four houses at Glenwood, on White Bear Lake, a block house at Pomme de Terre, and one house at McCarleyville. These were the only habitations they saw until they reached Georgetown, on the Red River, where there were two houses, built by the Hudson Bay Company. At the crossing of the Cheyenne River, President Smith, with a portion of the party, turned back, leaving Gov. Marshall with the remainder, to proceed to the Missouri by way of Devil's Lake. A military escort protected the party from attacks by roaming Indians. Arriving at Fort Stevenson, the expedition found it prudent to return at once, to avoid a large body of savages reported by scouts to be advancing toward the trail. It reached the settlements of Minnesota in safety.

The reports of these several expeditions convinced the Philadelphia banking firm that the land grant of the Northern Pacific Railroad was of great value, and therefore afforded a legitimate basis for credit. The country the line would traverse west of the pine forests of Northern Minnesota was inviting to settlement. On the Pacific slope a fertile region was found between the Cascade range and the Rocky Mountains, and the high valleys of Montana were shown to be exceedingly productive with the use of irrigation, while the mines had already caused prosperous towns of considerable size to spring up.

The topography of the country and the trails followed by the Indians and by miners and traders suggested three routes westward from the main range of the Rocky Mountains: one by the Salmon River to its junction with the Snake, and thence down the latter stream to the Columbia; one across the Bitter Root Range to the head waters of the Clearwater River, and down the Clearwater to the Snake and Columbia, the route taken by the Lewis and Clarke expedition; and a third following the Valley of the Deer Lodge, Hell Gate, Missoula, and Clarke's Fork Rivers—all in reality one stream under different names—to Lake Pend d'Oreille, and thence across the Columbia Plains to the junction of the Snake and Columbia. All three were thoroughly surveyed by the engineer corps of the Northern Pacific Company in the years 1870, 1871, and 1872. These surveys resulted in showing that there was no pass in the Bitter Root Range, south of Lake Pend d'Oreille, less than 5,000 feet above the sea; the passes ranging generally from 5,400 to nearly 8,000 feet in height. The mountain route, *via* Salmon River, proved to be some miles longer than the valley route, *via* Lake Pend d'Oreille, besides being much more difficult to construct. The mountain route, *via* the Clearwater River, was five miles shorter than the valley route, but was greatly inferior in all other respects, having a summit more than 3,000 feet above Lake Pend d'Oreille and much more curvature, and being more difficult and more costly to construct. It was ascertained that not only the routes *via* the Salmon River and the Clearwater River, but any route crossing the Bitter Root Range, must encounter serious trouble from snow, which would be avoided on the valley route.

It seemed so desirable to the Board of Directors to build down the Clearwater and Snake Rivers, because of the fertile character of the rolling table lands drained by those streams, that a final effort was made to discover a practicable pass. After it was determined to begin construction eastward from the Columbia River the definite choice of a route was left open till the results of a new survey made by Engineer McCartney were known. Not till a telegram was received from Mr. McCartney announcing that he had found no feasible pass across the Bitter Root Mountains did orders go out from New York to General Sprague, the Superintendent on the Pacific Coast, to begin grading on the Pend d'Oreille route.

On the map the road as completed seems to make a long detour to the northward to go around by Lake Pend d'Oreille; and many people in Lewiston, disappointed that it was not built through their town by the Clearwater route, are still in the habit of saying that it goes a hundred miles out of its way. Nevertheless, the measurements of the engineers showed that the northern bend made the road only five miles longer than a line would be up and down the crooked, narrow, streams heading in the lofty Bitter Root Range.

CHAPTER XIX.

AMENDMENTS TO THE CHARTER.

Weary Waiting upon Congress—Various Schemes for Obtaining Government Aid—Opposition to the Land Grant and Subsidy System—The Northern Pacific Company goes to Sleep for Two Years—No Board Meetings from 1868 to 1870—Congress Extends the Time for Beginning Work on the Road, and for Completing it—A Wise Change of Policy—Congress Authorizes the Issue of Bonds—Branch from Portland to Puget Sound Authorized.

THE history of the Northern Pacific enterprise for the years 1868 and 1869 is for the most part a narrative of weary waiting upon Congress for pecuniary aid, which was never given, and which the directors had no good reason to expect. Various schemes were broached before the Pacific Railroad Committees of the two Houses. At one time the effort was to procure a Government guaranty of interest on an issue of bonds at the rate of $40,000 per mile of road; at another to obtain the bonds of the United States on the same conditions upon which such bonds were given to the Union and Central Pacific companies by the legislation of 1864. Mr. Thos. H. Canfield took charge of the interests of the company at Washington, and President Smith and some of the other directors occasionally reinforced him for a short time. Favorable reports were obtained from committees and bills were placed upon the calendar, but there they died. Many influential men in both Houses took the position that the Northern route had a fair claim to the same assistance from the Government which had been accorded to the middle route. It was argued on the other hand that a double grant had been given the

Northern Pacific in lieu of a subsidy in bonds. The friends of the road urged in reply that the land grant was unavailable as a basis for credit, and that the company would be glad to restore half of it to the public domain if Congress would put them on the same basis as the two companies then building the middle line. They had to encounter, however, a determined opposition to the land grant and subsidy system. A considerable number of members would gladly have voted to abrogate the Northern Pacific charter, believing that such a course would commend them for re-election to their constituents. Many others would go no further toward aiding the company than to support a bill making a second extension of the limit of time for beginning construction operations. From a habit of careless and lavish generosity in making grants of the public domain to corporations proposing to build railway lines in the West, Congress had changed to an attitude of hostility toward all propositions for new grants, and of suspicious watchfulness of all companies to which lands had already been given. With such a temper prevailing in the National Legislature it is strange that the Northern Pacific managers should have wasted two years more in making arguments, appeals, and combinations in the lobbies and committee rooms of the Capitol. During those two years the Company, as an organization, went to sleep. The surveys were prosecuted in the summer of 1867, but no report was made of their results to the board until 1870, because there were no meetings of the board from February, 1868, to February, 1870. A meeting of stockholders and election of directors was not held in December, 1867, as required by the bylaws, nor in the two following years.

The only favor obtained from Congress prior to the passage of the amendments to the charter in 1869 and 1870, authorizing the issue of the bonds of the Company, was an act passed in 1868, extending the time for commencing work on the road until July 2, 1870, and the time for completing it until July 4, 1877. This was passed after very brief consideration and with very little opposition. The bill, as reported to the Senate, carried the limit of time for finishing the road forward to July 4, 1883. Just as it was about to pass, Mr. Ramsey, of Minnesota, moved to strike out "1883" and insert "1878." His amendment was agreed to, and the bill passed May 30 without a division. A month later, June 29, the House passed its own bill by a vote of 96 to 32, making the date July 4, 1877, and the Senate the same day, as the session was about to expire, took up that bill and passed it. Had the date as originally fixed by the Senate Committee, 1883, been adopted in the bill as finally passed, the Northern Pacific Company would have been saved a great deal of trouble and much expense, subsequently incurred for the protection of its rights under its charter.

In 1869 the managers of the Northern Pacific project finally, and with great reluctance, made up their minds that it was useless to besiege Congress with applications for Government aid, and began to consider the feasibility of building the road as an ordinary business enterprise, with the proceeds of a loan placed upon the money market. As a first step in his direction, they procured the passage of an act by Congress authorizing the Company to issue its bonds and to secure them by a mortgage upon its railroad and telegraph line, and construing "Puget Sound" in the Charter Act to mean all the waters connected with the Straits of Juan de Fuca within the territory of the United States. This latter clause was important, because it enabled the Company to make its western terminus at any point between the British boundary line and the head of the Sound, instead of confining it to Puget Sound proper, which is the crescent-shaped southern end of the large body of water popularly known by that name. It was defective in not including the land grant in the power to mortgage. This defect was perceived as soon as a scheme for a loan was fairly formulated.

The act in question bore date of March 1st, 1869. Another act was passed and approved April 10th, 1869, authorizing the continuation of the Portland branch to some suitable point on Puget Sound, to be determined by the Company, where it was to connect with the main line across the Cascade Mountains, and requiring the construction of twenty-five miles of the extension before July 2d, 1871, and of forty miles in each year thereafter until it should be completed.

Both these acts were passed with scarcely any debate on the indorsement of the Pacific Railroad Committees of the Senate and House. The ultra opponents of the Land Grant system attempted to defeat the second bill in the House, but could not muster sufficient votes to demand the yeas and nays. A brief statement of the purpose of the measure by Mr. Wilson, of Minnesota, carried it through.

CHAPTER XX.

THE JAY COOKE CONTRACT.

The Banking House of Jay Cooke & Co.—Mr. Cooke's Character as a Financier—His Contract with the Northern Pacific Company—A Hard Bargain—Five Millions Furnished to Begin Construction in 1870—A Town Site Company Formed—A New Bill Passes Congress Authorizing the Mortgaging of the Road and Land Grant—The Columbia River Line Made the Main Line to Puget Sound—A Brisk Contest in both Houses—Jay Cooke's Plan for a Foreign Loan—The Bonds Finally Offered to the American Public—Defects of the Financial Scheme.

PRESIDENT SMITH and the directors were very desirous of securing the services of the great banking house of Jay Cooke & Co. to sell the company's bonds and manage its finances. This house had placed the immense war loans of the Government, and by its success in that line was widely known on both sides of the Atlantic. No other banking institution in America could rival it at the time in the sort of popularity which comes from dashing enterprise and rapidly earned success. The head of the house, Mr. Jay Cooke, was an Ohio man, of a family of editors and bankers, who secured the important and profitable trust of selling the bonds of the Government through the friendship of Salmon P. Chase, the Secretary of the Treasury. The chief establishment of the firm was in Philadelphia, but it had branches in New York and London, and a bank in Washington called the First National, of which Mr. Cooke's brother, Henry D. Cooke was president. Jay Cooke had a talent for what the French call grand finance. His operations were on a large scale. Always bold and enthusiastic, and gifted with the faculty of inspiring others with his confidence and enthusiasm, his success in speculative times, when values were appreciating from abundant money, was almost a natural result of his mental organization. His great defect was a want of caution and foresight. He failed to understand that alternate expansion and contraction is the law of finance, and that the business of the world progresses like the frog in the well in the old arithmetic problem, which leaped up three feet and then fell back two. Mr. Cooke's schemes were based on the delusive idea that the pendulum of trade and finance always swings upward. He did not make provision for the inevitable downward movement.

He had developed a system of "popularizing" the Government loans by means of profuse advertising in the newspapers, supplemented by editorial articles and by a lavish distribution of pamphlets and circulars. No man in his day could equal him in the effective use of printer's ink. This system, with its appliances and local agencies, the Northern Pacific managers wanted to secure. They were sagacious in this effort, for it was unquestionably by far the best machinery in existence at the time for placing a loan.

Mr. Cooke was in no hurry about closing the bargain. He held the project under advisement for over a year. Meanwhile he sent out exploring parties, as we have seen in another chapter, to examine the vast uninhabited regions to be traversed by the road. He insisted that the mortgage should be made applicable to the lands granted to the company, as well as to its railroad line. With the understanding that legislation for this purpose should be procured, he made a contract with the company on May 20th, 1869, which was modified by a supplementary contract on January 1st, 1870. Let us see what the main terms of these contracts were. They provided for an issue of bonds to the amount of $100,000,000, bearing interest at the rate of seven and three-tenths per cent. in gold. This rate was adopted by the government for its last war loan, when its credit was at the lowest ebb, for the reason that it made the interest on a $50 bond, the smallest denomination issued, exactly one cent per day. Mr. Cooke had sold the 7-30 Government loan successfully, and insisted that the Northern Pacific loan should resemble it in all possible respects.

The banking firm credited the railroad with eighty-eight cents on the dollar for the bonds it sold, and as it disposed of them at par, its margin was a very liberal one. But the contract gave it $200 of the stock of the company for every $1,000 of bonds sold, which would have amounted for the completed road to about $20,000,000, and one-half of the remainder of the $100,000,000 of stock authorized by the charter. The twelve original proprietary interests which owned the stock were increased to twenty-four, and twelve of them assigned to Jay Cooke & Co. A considerable amount of the stock was given by the banking house to subscribers to the bonds, but in all cases an irrevocable power of attorney was taken, so that the firm, having purchased a thirteenth interest, controlled the management of the company's affairs. Other specifications in the contract made the firm the sole financial agents of the road, and the sole depositary of its funds; provided for the conversion of the $600,000 of old stock outstanding into bonds at fifty cents on the dollar, created a land company to manage the town sites, and bound the firm to raise $5,000,000 within thirty days from January 2, 1870, with which the company was immediately to commence building the road. It was also specified that the road should be at once located from the Montreal River in Wisconsin westward to the Red River, but construction was to begin at the intersection of the Lake Superior and Mississippi Railroad, a line already built from St. Paul to Duluth, the junction being near the Dalles of the St. Louis River and about twenty miles west of Duluth. As Jay Cooke & Co. owned a controlling interest in the Lake Superior and Mississippi Company, there was a practical unity of interest with the Northern Pacific, and the latter company had the advantage of the use of the twenty miles of completed road, with the lake terminus at Duluth.

Jay Cooke & Co. raised the five millions required to be ready within thirty days, by forming a "pool" in Philadelphia, the members of which took the bonds at par and were given the twelve proprietary interests in the stock at $50,000 each. The profit of the firm in this great transaction was $600,000 on the bonds for which it paid 88, and $600,000 on the stock for which it paid nothing; total, $1,200,000. The five millions of bonds carried with them a total of $41,000,000 of stock to be issued ratably as fast as sections of 25 miles of the road were completed. Each of the twelve proprietary shares was entitled to $93,400 nominal of the preliminary issue of stock, and in addition to $83,334 nominal in stock for the 20 per cent. stock, commission on the sale of bonds, provided for in the contract between the bankers and the company. By the time the road reached the Red River, the stock issued to each of these shares amounted to $541,234. One-half interest in a company formed to speculate in town sites on the Northern Pacific line also went with these twelve shares.

A new joint resolution was introduced in Congress in the winter of 1870, at the instance of Mr. Cooke, and passed in the face of a strong opposition. It authorized the issue of bonds secured by mortgage on all the property and rights of the company, which of course included its land grant, and the filing of the mortgage in the office of the Secretary of the Interior. It made the Columbia River line the main line to Puget Sound, and the Cascade line the branch, and it gave the company the right to select lands within a limit of ten miles on each side of its grant, to make up any deficiency in the lands within the original grant by sale or from occupation by settlers. This latter provision practically enlarged the area of the grant to thirty miles in the States and fifty miles in the territories on each side of the line.

This measure, which opened the way for procuring money to begin the construction of the Northern Pacific Road, originated in the Senate Committee on the Pacific Railroads, of which Mr. Howard, of Michigan, was chairman. It was brought up for consideration on February 28th, and occupied a good deal of time in the debates until April 21st. Its opponents might have been divided into two classes—those who conscientiously or for political effect were opposed to railway land-grants and would gladly have seen the Northern Pacific grant lapse by reason of the failure of the company to raise money to build the line, and those whose interests in the Union and Central Pacific Companies led them to oppose the building of a rival road to the Pacific Coast. Its chief supporters, beside Mr. Howard, were the Minnesota and Oregon Senators. The actual contest was, in the end, not so much over the merits of the measure itself, as over amendments which Mr. Thurman, Mr. Wilson, Mr. Sherman, and others sought to attach to it. One of these amendments required the company to sell its lands only to actual settlers, and at a price not to exceed $2.50 an acre; another fixed the price at $1.25 per acre; a third required all the land of the grant not sold within three years to be subject to settlement and pre-emption at $1.25 an acre; a fourth provided that the railroad should carry troops, mails, and government freight free of charge. All these were voted down, as was an amendment striking out the provision that the railroad company might select indemnity lands within ten miles of the limits of the grant. Finally on April 21st, the joint resolution was passed by a vote of 40 yeas, to 11 nays.

Mr. Wheeler, of New York, chairman of the Committee on Pacific Railroads, brought in the joint resolution on May 5th. A whole day was consumed in filibustering by the opponents of the measure, who were fighting for a chance to have their amendments considered. The next day the House refused by a vote of 77 to 91 to order the joint resolution to a third reading, which had the parliamentary effect of rejecting it finally, but Mr. Wheeler had voted in the affirmative in order to have the right to move to reconsider, which he did, and then moved to refer the joint resolution with all the amendments which might be offered back to his committee. No fewer than twenty-four amendments were sent up to the clerk's desk.

Two weeks later Mr. Wheeler reported the joint resolution again to the House just as it came from the Senate, and said that his committee desired that every gentleman who had offered an amendment should have an opportunity to submit it to vote. The mover of each amendment made a short speech in its behalf. Speeches and roll-calls occupied two days' time. One after another all the amendments were rejected, and the joint resolution was finally passed by yeas 106, nays 81. It is not worth while to give here the numerous amendments. Many duplicated each other in essential features, all were in the line of restrictions upon the right of the company to manage its road or dispose of its land grant in its own way, save a few relating to the right of other roads to cross the grant, which were unobjectionable, and were rejected only because their adoption would send the measure back to the Senate, where it might be lost for lack of the time, as the session was near its close.

Mr. Cooke's first idea was not to place the bonds by popular subscription in America, but to sell all or a great part of the loan in Europe. In 1869 his partner, Wm. G. Morehead, went across the Atlantic with a prospectus in his pocket to be submitted to the Rothschilds. In it Mr. Cooke had set out the conditions of the loan and the prospects of the Northern Pacific enterprise in such an attractive shape as to make it appear that there would be eighty millions of dollars of profit to be divided between the Rothschilds and his house if the former would furnish the money to build the road. Morehead lacked faith in the Northern Pacific project from the first, and made so cold a presentation of the proposal that the Rothschilds declined it without much consideration. Morehead then telegraphed to Cooke, advising him to have nothing to do with the business, and went off to Egypt to spend the winter on the Nile. The next spring Mr. Cooke met at a dinner party at the house of Baron Gerolt, the Prussian Minister at Washington, two young bankers connected with good houses, one in Amsterdam and one in Berlin. He so far interested them in the Northern Pacific plan that they, after a visit to his home at Ogontz, drew on their banks for half a million dollars, deposited the drafts with Mr. Cooke, and hastened home to organize a combination of forces to take fifty millions of the loan. Arrangements involving leading banking firms in London and continental cities were on the point of being completed when the French Emperor, Napoleon III., started for the Rhine, and began his disastrous attack upon Germany. The whole transaction came sharply to an end, and Mr. Cooke was compelled to fall back upon the American market. Then his apparatus of advertising and local agencies was brought into efficient operation.

Mr. Cooke drove a hard bargain with the railroad company. He made his own terms, and made them so exacting, as he afterwards said, that he did not suppose they would be accepted. It must be remembered, however, that the Northern Pacific managers sought him, not he them. They regarded him and his bank with its great reputation and influence as a good acquisition at any cost. They conceded to him, first, an unusually high rate of interest payable in gold to make the bonds attractive to the public; second, a discount of twelve cents on the dollar of the face value of the bonds; third, an ample provision in the way of stock to pay expenses of advertising and selling the loan; fourth, a half interest in the remaining stock. In return the banking firm gave only their promise to raise the money to build the road. The financial scheme was faulty in other respects than the great allowances of stock and commissions. It pushed the company along on the highway to certain insolvency. No extraordinary foresight was needed to see that a railroad could not be built through two thousand miles of absolute wilderness, and settle and develop the vacant country along its line fast enough to provide from its net earnings for $7.30 interest per annum on $100 for every $88 expended upon it. As soon as the sale of bonds ceased, and the interest on the debt could not be provided for by increasing the principal, bankruptcy was inevitable. The years 1869, 1870 and 1871 were not, however, times when prudence was a common commodity. Men's heads were turned by the apparent prosperity of the United States. It was thought that any draft on the future could be met, that the business of the country could go on swimmingly with all sails set, for an indefinite period. Yet the breakers were close at hand.

CHAPTER XXI.

SALE OF THE 7–30 BONDS.

Jay Cooke & Co.'s Efforts to Popularise the 7-30 Loan—Extensive and Liberal Advertising—Favorable Opinions from Prominent Public Men—Favorable Conditions for Selling the Bonds—Cooke's Branch House in London—The Bonds Largely Bought by People of Moderate Means—Truthfulness of Jay Cooke's Published Statements About the Northern Pacific Belt—Extracts from his Pamphlets.

WITH his own terms accepted by the company, with the legislation he desired concerning the mortgage and land grant adopted by Congress, and with his own banking firm accorded the selection of two directors in the Northern Pacific Board, and a controlling interest in the stock of the company, Jay Cooke began his efforts to "popularize" the 7-30 loan in the summer of 1870. He employed the same methods he had before successfully used in the sale of the Government loans. Advertisements were published in the newspapers far and wide, including the country weeklies as well as the city dailies. Liberal payments for advertising secured favorable editorial comments on the loan and on the railroad enterprise generally. For many months it was almost impossible to take up a newspaper in any part of the Northern States without finding something in it concerning the Northern Pacific. Prominent statesmen and army officers wrote letters describing the merits of the country the road was to traverse. Generals, members of Congress, Governors of States, and the Vice-President of the United States gave the weight of their indorsement to the project. Their opinions, together with extracts from the reports of engineers and others sent out to survey the line and reconnoiter the country were printed in pamphlets and spread broadcast. An effective circular was compiled from the arguments of the men in Congress who had opposed the grant to the company because of its great extent and of its fertility and value for settlement. In these and many other ways popular confidence in the loan was created and maintained. The bonds were put on the market at a favorable time. The Government had ceased to be a borrower and had begun to diminish the principal of its debt, while bringing down the rate of its interest to five per cent. The profits of business were large. Money was abundant, and new investments which promised large returns were sought with more eagerness than judgment. Unprofitable railways were built, unprofitable mines opened, and unprofitable factories established in the reckless expansion of business enterprise which characterized the times.

Jay Cooke & Co. had established a branch banking house in London under the firm name of Jay Cooke, McCulloch & Co., the resident partner being Hugh McCulloch, who had just resigned the Secretaryship of the United States Treasury. Agencies for the sale of the Northern Pacific bonds were opened in all the chief money centers of the continent of Europe, and pamphlets in German and French were freely distributed. The chief sale of the bonds, however, was in the United States. They became for a time a favorite investment with all classes of people. The small savings of thousands of mechanics, farmers, and tradesmen, as well as the large hoards of capitalists sought investment in these securities. Money for subscriptions came in from all parts of the country. Over eight thousand names were put upon the books of the company. There was hardly a State that was not represented by numerous subscribers. In after years, when the land grant of the company was assailed by hostile influences in Congress, this wide diffusion of the bonds proved a great element of strength. The bondholders, who became stockholders after the reorganization of the company in 1874, brought their influence to bear upon their representatives in Congress to protect the company's rights and interests. Scores of Congressmen were surprised to learn by letter after letter from constituents that the Northern Pacific had influential friends in their own districts.

After the great financial panic of 1873 had precipitated the house of Jay Cooke & Co. into bankruptcy, the firm was accused in the public press of misrepresenting the character of the Northern Pacific Railroad project, and of grossly overrating the value of the land grant upon which it was chiefly based. The maps showing the isothermal lines bending to the North beyond the Mississippi, so as to give to the Yellowstone country the climate of Northern Ohio, and to the Puget Sound region that of tide-water Virginia, came in for no end of ridicule, and the whole section the road was to traverse was sneered at and laughed at as " Jay Cooke's banana belt." Yet the statements in regard to climate and soil made in Cooke's publications were not exaggerations. Read to-day, in the light of the present accurate knowledge of the country between the Red River of the North and the Pacific, they appear to be truthful descriptions. A few of them may properly be quoted here in justification of the fiscal agents of the Company and of the Company itself, in inviting public confidence in the enterprise of a railroad to the Pacific by the Northern route.

On the subject of climate, the most widely circulated of the pamphlets issued by Jay Cooke & Co. said:

"The belt of country tributary to the Northern Pacific road is within the parallels of latitude which in Europe, Asia, and America, embrace the most enlightened, creative, conquering and progressive populations. It is within the climatic conditions illustrated on the maps by the curvature northward of the isothermal lines of mean temperature which mark on the Pacific coast in latitude 47 North, the mildness of the climate of the Chesapeake Bay on the Atlantic side in latitude 38, and which give to the region of this railroad between the Great Lakes and the Pacific a milder atmosphere than is to be found anywhere else at the same distance north of the equator, except upon the western coast of Europe. The summer isothermal line of 70 degrees, which in Europe passes through Southern France, Lombardy, and the wheat-growing region of Southern Russia, strikes the Atlantic coast of the United States at the east end of Long Island, and passing through Central Pennsylvania, Northern Ohio, and Indiana, diverges northwesterly, and runs up into the British Possessions to latitude 52, at least 360 miles north of the line of this road.

"The fact of this mildness of climate is abundantly established. Nowhere between the Lakes and the Pacific is the climate colder than in Minnesota; and this great State is not surpassed as a grain-growing region, or in healthfulness of atmosphere. The seasons of Dakota are very similar to those of Iowa, and from Dakota westward the climate steadily modifies, until, in Oregon and Washington Territory, there is almost no winter at all aside from a rainy season, as in California. In many portions of Dakota, Montana and Northern Idaho, cattle and horses range out all winter, and keep in excellent condition on the nutritious grasses of the plains and valleys. Records kept by Government officers at the various military stations on the upper waters of the Missouri show that the average annual temperature for a series of years has been warmer in Northern Montana than at Chicago or Albany.

"This remarkable modification of climate, the existence of which no well-informed person now questions, is due to several natural causes, chief among which are probably these: First, the mountain country lying between the 44th and 50th parallels is lower by some 3,000 feet than the belt lying immediately south. The highest point on the line of the Northern Pacific road is 3,300 feet lower than the corresponding summit of the Union and Central line. Both the Rocky and the Cascade ranges, where they are crossed by the Northern Pacific route, are broken down to low elevations compared with their height four hundred miles southward. This difference in altitude would itself account for much of the difference in climate, as three degrees of temperature are allowed for each thousand feet of elevation. But, second, the warm winds from the South Pacific which prevail in winter, and (aided by the warm ocean current corresponding to our Atlantic gulf-stream) produce the genial climate of our Pacific coast, pass over the low mountain ridges to the north of latitude 44°, and carry their softening effect far inland, giving to Washington Territory the climate of Virginia, and to Montana the mildness of Southern Ohio."

This is the exact truth concerning the climate of the Northern Pacific belt; yet so wedded are most uninformed people to the ignorant assumption that latitude strictly governs climate, that it is disbelieved by many to-day, and was generally scouted when the Northern Pacific Company was overtaken by financial disaster. The same pamphlet goes on to say:

"One of the causes heretofore cited as helping to produce the mild seasons of the New Northwest—namely, the depression of the mountain ranges toward the north—may also account for the equable rain-fall in nearly all parts of this vast area. The southwest winds, saturated by the evaporation of the tropics, carry the rain-clouds eastward over the continental divide, and distribute their moisture over the fertile belt stretching from the mountains to the lakes. Farther south the mountain ridges, with their greater altitude, act as a wall against the warm, moist, west winds; hence the colder winters and the comparative dryness of much of the region south of Montana and east of the mountains. That the country tributary to the Northern Pacific Railroad, and embracing its land grant, has, with some exceptions, an adequate supply of atmospheric moisture for all purposes of agriculture and stock-raising, there is no question. The proof is abundant and conclusive, and is made up of the concurrent testimony of settlers who have spent years in all portions of the great fertile belt, and of Government officers who have measured and reported the rain-fall for successive seasons."

There was no misrepresentation in the above paragraph, nor was there in this, relating to soil:

"Admittedly there are detached portions of the vast region tributary to the Northern Pacific Railroad, where for the present the rain-fall is insufficient for most crops, and irrigation is necessary; yet even in such localities the grazing is usually good. But, making ample allowance for the occasional absence of sufficient moisture, this Land Grant of the Northern Pacific Road is, as a whole, abundantly irrigated by nature. The wonderful network of living brooks, lakes, streams, and navigable rivers with which this region is supplied is perhaps its most striking feature. Those who have traversed the whole of the fertile belt from the Mississippi to Puget Sound, claim that there is no other section of the continent of equal area which, all things considered, surpasses this in natural resources, including a fertile soil; and the evidence is superabundant in support of this view. That the average of soil in those portions of Minnesota, Dakota, Montana, Idaho, Washington, and Oregon adjacent to the Northern Pacific Railroad is good, there is absolutely no question. Of alkali-plains, sand, and sage-brush there is next to none at all on the route."

From another pamphlet of a few months' earlier date, these extracts are taken relating to wheat-raising, pasturage, timber and minerals:

"Pages of incontestable evidence could be introduced here to prove that nowhere in the world can such large crops of wheat, barley, rye, oats, potatoes and other roots be raised as on and about the Land Grant of the Northern Pacific Railroad; that nowhere in the world are there such apples, pears, plums, and cherries as those grown on and about all the Grant west of the Rocky Mountains; that fruit-trees there invariably bear generally in two, at most in three years, from the graft; that the curculio and other insects destructive to fruit here are wholly unknown there; that nowhere do shade, fuel, and fruit-trees grow so rapidly, vigorously, and beautifully, as there: that nowhere in the world is there a grass to be compared to that combination of timothy and oats, the 'bunch grass,' which covers most of this Land Grant, and which on the ground is perfect hay in July and in January; that nowhere is such possibility of grazing cattle in vast herds without shelter, prepared fodder, or care, as exists all over the regions to be traversed by the Road on both sides of the Rocky Mountains, whose universally diffused 'bunch grass' has justly given to it the name of 'the graziers' paradise.'"

"The materials for the greatest lumber trade the world has seen exist on and near the Western end of this Land Grant, and maintain with a single interruption to the eastern foot of the Rocky Mountains. Forests of fir of three varieties, of cedar of two varieties, of pine, spruce, hemlock, cypress, ash, curled maple, and black and white oak envelop Puget Sound, and cover the larger part of Washington Territory, surpassing the woods of all the rest of the globe in the size, quality and quantity of the timber. The firs in innumerable localities will cut 120,000 feet to the acre. Trees are common whose circumferences range from 20 to 50 feet, and whose heights vary from 200 to upward of 300 feet. The paradox of firs too large to be profitably cut into lumber, is to be seen all over Western Washington. These are rejected by the choppers, and trees having diameters ranging only from 30 to 50 inches are selected, and these yield from 70 to 200 feet of solid trunk free from limbs and knots. The cedars of Washington are as thick, through, as the firs, but not as tall. So prodigal is Nature in this region, and so wastefully fastidious is man, that lands yielding only 30,000 feet of lumber to the acre are considered to be hardly worth cutting over. Forests yielding 100,000 feet and upward are common all around Puget Sound. The wood of the firs and cedars, unequaled for lightness, straightness of cleavage, and resistance of moisture, and stronger than oak and more retentive of spikes and tree-nails, will supplant all other material for ship-building on both shores of the Pacific Ocean. This product of the as yet scarcely scarred forests of Washington Territory, was sold in California, South America, Australia, Japan, China, the East Indias and Europe.

"From the eastern foothills of the Rocky Mountains to Puget Sound, this Land Grant belts the richest mineral deposits on this continent, consisting of gold, silver, platinum, lead, copper, iron and rock-salt. The banks and bars of every stream running from the Rocky range into the Columbia, Yellowstone, Missouri, and Puget Sound will pan out gold. At the eastern end of the Grant, and on or near the line of the road, are inexhaustible deposits of copper and of the famed Lake Superior magnetic iron ores.

"This Land Grant has an abundance of fuel—coal, lignite, and wood. Bituminous coal of the best quality outcrops for thirty miles on the eastern rim of Puget Sound. Three veins have been opened which can be cheaply worked, the lowest being sixteen feet thick. West of the Cascade range of mountains coal is found and mined at different points all the way from Willamette Valley to Bellingham Bay. It has been found near the Cowlitz and Snoqualmie Pass of the Cascades. It outcrops on the Yellowstone and the headwaters of the Missouri. It is extensively mined for Government and public use at the great bend of the Missouri.

"The way-traffic and way-travel on the Northern Pacific Railroad will be that which will inevitably spring from a wide belt of this continent whose soil will yield immense crops of grain, fruit, and vegetables, whose pasturage is the marvel of travelers, the mildness of whose climate is seemingly a paradox, but is superabundantly testified to by man and beast. The domestic cattle of Montana, Idaho, Washington, and Dakota, range out all winter and are fat in March. The Mexican horses, stolen by the Sioux, Cheyennes, and Assiniboines, are turned out to shift for themselves on the fall of snow, from latitude 45 up to 53, and come in in the spring fat, sleek, and strong. Unsheltered, unfed, they thrive in the open air on grass reached by pawing off with their hoofs the occasional covers of snow. Much of the line of the Northern Pacific road passes through the winter homes of countless herds of buffaloes, elk, deer, and antelopes."

Making some allowance for the enthusiastic style of these paragraphs, their statements of fact are truthful. Indeed, much more might have been added concerning the grain-growing capacity of the Dakota prairies, and the rolling upland plains of Eastern Washington, and of the fertility of the Yellowstone Valley, had the character of these regions been understood then as now. Enough has been printed here to show that the statements concerning the country tributary to the Northern Pacific Railroad, on which the first bonds issued upon its credit were sold, were not untruthful or unduly colored to stimulate investment.

CHAPTER XXII.

CONDITION OF THE NORTHWEST IN 1870.

Northern Minnesota a Wilderness—No Farms in the Red River Valley—The Country of the Savage Sioux—The Mining Settlements in Central Montana—Another Uninhabited Region Beyond—The Vigorous Young Settlements of Oregon and Puget Sound—Their Aid to the Railroad Enterprise—The Obstacles to be Surmounted—2,000 Miles of Railway to be Built Through a Wilderness.

LET us now glance at the condition of the Northwest in the summer of 1870, when the managers of the Northern Pacific Railroad began the work of construction at Thomson Junction in Northern Minnesota. The Lake Superior and Mississippi Railroad had just been built, with the aid of a land grant embracing much valuable pine lands, from St. Paul to the new town of Duluth, laid out on speculation in the woods on the lake shore. Across the Bay of Superior was a straggling little hamlet called Superior City, which could count, perhaps, twenty years of sleepy existence, hybernating in winter when the lake was tightly frozen, and living at all times chiefly on hope. Beyond these two rival places there was not a town, village, or hamlet westward on or near the line marked out for the Northern Pacific Railroad for a distance of over a thousand miles. Between the head of the lake and the mining camps among the Rocky Mountains in Montana no abodes of civilized men existed, save two or three military posts and Indian agencies, and a few isolated trading stations. Northern Minnesota was a forest into which the lumberman had not yet penetrated, save for a few miles back of Lake Superior. The beautiful region in the western part of the State, dotted with little lakes separated from each other by park-like stretches of woodland, had but lately been the home of the warlike Sioux, and was then quite destitute of population. On the Red River of the north there were two houses at the old Hudson's Bay trading post of Georgetown, and further up the stream the ruins of a settlement at Breckenridge which the Sioux had destroyed. No farms had been opened, and the vast alluvial plain bordering the river and stretching far northward to Lake Winnipeg was believed by most army officers who had traversed it to be worthless for agriculture. Where the thriving city of Winnipeg now stands in Manitoba there was only a British fort, under whose walls a few Canadian traders and half-breeds had built their huts.

Between the Red River and the Missouri the country was still claimed by the Sisseton and Wahpeton bands of the Sioux Indians, whose title was not finally extinguished until 1872. Beyond the Missouri, and as far west as the Belt range of the Rocky Mountains, the whole vast region of valleys, plains and mountains was in the undisputed occupancy of the savages. It was the buffalo hunting-ground, to which the tribes resorted from the North and the South, and even from beyond the Rockies, for their annual supplies of jerked meat and skins. Near the Falls of the Missouri a little town had grown up at Fort Benton, to which steamboats ran in the season of high water, taking goods for the Indian reservations and for transport by wagon to the distant mines of Montana, and bringing back buffalo robes, bullion and beef cattle. In the high valleys and gulches of the Rocky Mountain system there were a few scattered mining settlements, quite isolated from the rest of the world. The miners had developed a unique, self-sustaining, and self-reliant little community, making their own laws, and executing them by the summary process of Judge Lynch's court when cutthroats and robbers threatened to get the upper hand of orderly society. They had been given a territorial organization by Congress, and had developed such prosperous little towns as Helena (their capital), Bozeman, Deer Lodge, Virginia City, and Bannock. They hauled their supplies from the head of steamboat navigation on the Missouri, more than two hundred miles from the principal mining camps, or, still further, from the newly completed Union Pacific Railway in Utah. The Montana settlements dated from 1862, when a party of men came up the river to Fort Benton with horses, wagons and tents, and struck off into the mountains in search of the gold of which hunters had spread report. They found the yellow grains and nuggets in the beds of the little streams that ran out of the mountain gorges. Soon they were joined by parties of adventurous emigrants, who traveled a thousand miles with ox-teams across the plains from Western Missouri—deserters from the contending armies there, or people who were confused by the din of the Civil War raging around them, and, not wishing to risk their lives on either side, packed their families and movables into wagons and struck out for the new mines in the Rocky Mountains. Detachments of gold hunters also came from California, believing, like all of their wandering, reckless tribe, that luck was always just ahead of them in some new "diggings," and with them mingled discharged laborers, gamblers, and adventurers of all sorts, from the Pacific Railroad, whose ends were advancing across the deserts from the Missouri and the Golden Gate to meet in the basin of the Great Salt Lake. It was a strange, wild aggregation of reckless, rascally, daring, enterprising and industrious elements; but with the wonderful self-organizing faculty of the Anglo-Saxon race, order was soon evolved from chaos. Some of the emigrants found that the raising of grain and vegetables in the valleys, by the aid of irrigation, was more profitable than mining, and opening farms, grew rich on prices based on the enormous cost of transportation from the East. Others began stock-raising; others engaged in the mechanical trades. Thus it was that by the time the construction of the Northern Pacific Railroad began, there was in the mountains, a thousand miles away, an important community numbering, perhaps, 20,000 souls, greatly interested in its progress.

West of the Rocky Mountains, on the headwaters of the streams running into the Columbia, were other settlements of miners in the Territory of Idaho, similar in character and history to those of Montana. The rugged range of the Salmon River Mountains, having a general east and west course, divided the Idaho villages and camps into two distinct groups. The southernmost, having its center at Boise, found an outlet to California by way of the Central Pacific road. The northern group had its depot of supplies at Lewiston, at the confluence of the Snake and Clearwater Rivers, a point accessible from Oregon by navigable waters. On both sides of these two rivers spread out an extensive stretch of high table-lands, thickly covered with rank, nutritious grasses, and of great grain-producing capacity. These table-lands, here reaching from the bare basaltic plain of the Columbia to the encircling rim of the Bitter Root and Blue Mountains, may be roughly estimated to have a length of three hundred, and a width of fifty to one hundred, miles. This region was wholly destitute of permanent settlement in 1870, save near its southwestern extremity, where the town of Walla-Walla stood, and where farmers had begun the cultivation of wheat. There were a few military posts and a few Protestant and Jesuit missions on the Upper Columbia and Spokane Rivers and Lake Cœur d'Alène; but they could hardly be called settlements, for their business was exclusively with the Indian tribes.

Beyond the Cascade Mountains, however, there was a remarkably vital and enterprising young community in Oregon, finding its chief support in the wheat-fields of the Willamette Valley. Numbering less than 100,000 souls at the time, this vigorous little body of people had accomplished great results in a single generation. They were separated from the rest of the civilized world by many stretches of barren desert and rugged mountains. The nearest large city, San Francisco, was 650 miles distant by sea. Yet in their isolation they built a city of their own; they conquered and tilled hundreds of thousands of acres of virgin soil; they placed steamboats on their rivers; they built railways around the two obstructions to navigation on the Columbia, the Cascades and the Dalles, and thus established by boat and rail a system of communication with the far interior; they attracted the commerce of the world to their shores. North of them, in Washington Territory, was another community nearly allied to, and, in some respects, an offshoot of their own, sparsely grouped around the beautiful, deep waters of Puget Sound, and largely engaged in cutting and exporting the magnificent timber growing upon its shores. To these two communities the Northern Pacific Railroad meant quick communication with the great East, better markets, an influx of population, new industries—in a word, growth and prosperity in all ways. From them, and their representatives in Congress, the enterprise received earnest and valuable support.

It will be seen from this brief review of the condition of the country across which the Northern Pacific line was to be thrown, that the enterprise of building the road was one of great magnitude, and was beset by peculiar difficulties. For the first thousand miles there was absolutely no civilized population. The line was projected into vacancy, so far as traffic and facilities for construction were concerned. It had to carry its supplies and its laboring force with it, and whatever business it obtained it was obliged to create by attracting settlers to the wild regions it penetrated. Farther west it reached a mountain district in Montana, about two hundred miles across, very sparsely settled, in widely separated mining camps and little strips of irrigated valleys, by a community full of energy and of possibility of future growth, but raising no surplus of supplies, and having no unemployed laboring population to furnish for railroad building. Then came another wide stretch of uninhabited country, and then at the extreme western end of the line the new settlements of Oregon and Washington, still too feeble in numbers, and too much engrossed in subduing fields and forests and in securing local transportation lines for their immediate home wants, to furnish either capital or labor for a great transcontinental road. They were of inestimable advantage to the undertaking, however, in the facilities they had already established for river and sea transit, and for the supply of food products. Small as were then the settlements of the Pacific Northwest they were centers of advanced civilization, and were in constant communication by sea with the great cities of the world. They had neither labor nor money to spare for the Northern Pacific enterprise, but they had the conveniences for the transfer and application of both. Construction work at the western end of the line encountered no more serious difficulties than at the eastern end, save those arising from the great cost of material, the high rate of wages for skilled labor, and the necessity of importing Chinese labor for grading and tracklaying. It was in the vast interior, without roads, bridges, or population, that formidable obstacles were encountered. The problem was to build two thousand miles of railroad, within a scanty limit of time, and with uncertain financial resources, through a country known, for the most part, only to the aboriginal savages who roamed over it.

CHAPTER XXII.

BUILDING THE ROAD.

Construction Work begun in 1870—Surveys in Minnesota—A Committee sent to the Pacific Coast—Purchase of St. Paul and Pacific Stock—Duluth and Superior—Completion of the Minnesota Division—Work begun on the line from the Columbia River to Puget Sound—Controlling Interest in Oregon Steam Navigation Company Bought—Scarcity of Funds in 1872—President Smith Resigns—A Review of his Administration.

CONSTRUCTION work on the Northern Pacific Railroad began in the summer of 1870. With the five millions of dollars received from Jay Cooke and Company and the prospective large receipts from the sale of bonds, the President and directors felt that the time had come for energetic efforts to build the line. Detailed surveys were completed during the spring from Thomson's Junction to the crossing of the Mississippi River, where a town was laid out, and named Brainerd, in honor of the father of President Smith's wife. In April, Messrs. Rice, Cass and Ogden, of the Board, were appointed a committee to proceed to the Pacific coast and locate the main line and the branch between the Columbia River and Puget Sound, and to select sites for future towns. At the same time the purchase of a controlling interest in the stock of the St. Paul and Pacific Railroad Company was effected. This Company had a considerable land grant, and was organized to build a system of roads extending from St. Paul to the British line at St. Vincent and also to Breckenridge on the Red River, and to Brainerd. The importance of St. Paul as the first great railroad center northwest of Chicago was fully realized by the Northern Pacific managers, and by controlling the stock of the St. Paul and Pacific Company, they expected to be able to make its lines virtually extensions and feeders of their own road. They also appreciated the value of the then entirely undeveloped Valley of the Red River of the North as a region likely to furnish heavy traffic in the future, and rightly considered that rich agricultural region as properly a part of the area of country which by its geographical position was naturally tributary to the Northern Pacific enterprise. They went so far in the execution of the wise plan thus early matured for controlling the lines chartered to be built from St. Paul to the Red River Valley and the Manitoba boundary, as to furnish large sums of money, and to direct the location and construction of a considerable portion of the St. Paul and Pacific system; but its realization was afterwards frustrated by the financial troubles of the Northern Pacific Company, which compelled it to part with the stock of the other company. The St. Paul and Pacific went into bankruptcy, was reorganized under the name of the St. Paul, Minneapolis and Manitoba Railroad Company, and has since become a successful corporation, paralleling the Red River on both sides with its lines, and competing with its former owner for the traffic of much of that region.

In June, 1870, a contract was made for the construction of the Minnesota Division of the road, and ground was broken in July, at Thomson's Junction, where the line left the Lake Superior and Mississippi Railroad. A half interest in the road of the latter company from the Junction to Duluth was purchased, and an artificial harbor was created at Duluth by cutting a canal across the low sandy peninsula through which vessels could enter the waters of the bay. The town of Superior, lying in sight from Duluth across the bay, had a natural harbor, and had been waiting for a quarter of a century for the railroad to give it prosperity. Great disappointment was felt in that town at the determination of the Northern Pacific to make its terminus at Jay Cooke's new speculative city of Duluth, and the Governor of Wisconsin was induced to bring suit against the company on account of a dyke constructed in Superior Bay, within the limits of Minnesota, which it was alleged was detrimental to the harbor of Superior. This suit was withdrawn on the promise of the Company to build a line to Superior and to put that place on an equal footing with Duluth for lake traffic; a promise which the Company was not able to redeem until 1882.

During the summer of 1870, and the whole year of 1871, money in abundance poured into the treasury of the Northern Pacific Company from the sale of its bonds under the Jay Cooke contract. In less than two years' time nearly thirty millions of dollars were received. This flow of funds stimulated great activity and far-reaching enterprise, and many projects were set on foot which had to be abandoned when the pressure of hard times came upon the Company. The Minnesota Division was finished to Brainerd in 1870, and to the Red River in 1871. Twenty-five miles of the line in the Valley of the Cowlitz, in Washington Territory, were graded at heavy expense in 1870, and completed in the spring of 1871. W. Milnor Roberts, of Philadelphia, was now the Chief Engineer, Edwin F. Johnson having been partially retired with the title of Consulting Engineer. Surveys were prosecuted in Dakota and Montana, and on the Pacific Coast. A line was located from Kalama on the Columbia River to the mouth of the Snake River, and thence to Lake Pend d'Oreille. In February, 1872, the Company took the road from Brainerd to the Red River off the contractor's hands, and shortly afterwards opened it for traffic. A lease of the entire line of the Lake Superior and Mississippi Railroad was effected, and a controlling interest in the stock of the Oregon Steam Navigation Company was purchased. The Navigation Company operated nearly all the steamboat lines on the

Columbia, Snake and Willamette Rivers and on Puget Sound, and connected with a line of ocean steamers to San Francisco. It owned, besides, the portage railroads around the obstacles to navigation in the Columbia River, at the Dalles and the Cascades. By the purchase of this stock the Northern Pacific Company acquired possession of nearly all the transportation facilities then existing in Oregon and Washington Territory. This exceedingly valuable property the Company was obliged to give up when overtaken by the financial crisis of 1873, and in new hands it furnished the foundation of the great rail and water transit system, now controlled by the Oregon Railway and Navigation Company.

In the summer of 1872, the Northern Pacific Company began to be pressed for funds to go on with the work. Money had come in rapidly and been spent freely, but the market had taken about as many bonds as it could be persuaded to take, even by the lavish and indiscriminate advertising which Jay Cooke & Co. still kept up. There was dissatisfaction in the board with President Smith's management; some of the members thinking he had gone too fast, and spent money too rapidly during the two preceding years; besides his duties to the Vermont Central Railroad, of which he was receiver, occupied much of his time, and appeared to have paramount claims upon him. For these reasons he offered his resignation on the first of August, 1872, and it was accepted to take effect on the first of October. In the latter part of August, Jay Cooke came before the board of directors with the unwelcome news that the Company was already in financial straits, and must be helped out by a loan raised on the individual credit of the members of the board. The shadow of coming calamity had already fallen upon the enterprise, and the completion of the road to the Missouri River and of the short line from the Columbia River to

Puget Sound, before the crash came in 1873, was at the cost of a considerable floating debt.

In reviewing the past brief period of active efforts to build the Northern Pacific Railroad, beginning in 1870 and ending in 1873, credit must be accorded to President Smith and the directors for zeal, enterprise and far-sighted sagacity. They saw the importance of a terminus at St. Paul, not contemplated by the charter of the road, and of a control of the lines projected in the Red River Valley. They determined upon measures for a line to the Michigan boundary to connect with an allied line across the Northern Peninsula of that State to the Sault. They contemplated the building of branch local roads in Northern Minnesota. They understood that the Columbia River line, in reaching Puget Sound by way of Portland, was of primary importance, and wisely subordinated to it the shorter line across the Cascade Mountains originally intended to be the main road. They took prompt measures to prevent the growth of the rival transportation interest in Oregon, which afterwards, when separated from Northern Pacific control, occupied the Columbia Valley and the rich wheat region beyond Walla Walla with independent lines of road, and was a powerful competitor until practically united with the Northern Pacific in 1881 through the efforts and the joint presidency of Henry Villard. The faults of their management were a too lavish use of money, and a too hopeful view of the future. They acted as if they believed their treasury to be a widow's cruse of oil which would never run dry. The thirty millions they expended, if carefully employed, even in that day of high prices, would have produced a better result than 600 miles of road burdened with a floating debt of nearly five millions. They floated with the current of the confident and extravagant times, without hearing the roar of the breakers ahead.

CHAPTER XXIII.

PRESIDENCY OF GENERAL CASS.

A Parenthesis in the Affairs of the Company—General Cass's Education and Career in the Army, and in Business—He Builds the First Iron Bridge in the Country—Establishes the Adams Express Company—President of the Pittsburg, Fort Wayne, and Chicago Railroad—Joins the Smith Syndicate to Acquire the Northern Pacific Franchise—Selecting a Site for a Terminal City on Puget Sound—Why Tacoma was Preferred—A Commission Appointed to Settle the Question—The Tacoma Land Company—General Cass's Speech to the Board—His Investment of Stock in Red River Valley Lands—The Cass-Cheney Farms—Features of his Administration.

GENERAL CASS'S administration is described by himself as a parenthesis in the affairs of the Northern Pacific Company. It began in October, 1872, and lasted until he accepted the receivership of the Company in the bankruptcy proceedings begun in March, 1875, thus covering the period of depression in the corporation's affairs followed by insolvency, and ending in a complete and wholesome reorganization of its financial basis. During this period the only effort in the way of construction was to push forward to a temporary terminus and resting-place at the Missouri River, the controlling policy being to retrench expenses, and to wait for better times.

General Cass was born in Muskingum County, Ohio, in 1810. His parents were of New England birth. When he was fourteen years old he was sent to live with his uncle, Lewis Cass, in Detroit, and go to school. Lewis Cass was then Governor of Michigan Territory. Probably the young nephew from the backwoods of Southern Ohio acquired his political convictions, as well as his education, while under the roof of the great Democratic statesman.

The influence of the uncle secured him a cadetship in the United States Military Academy at West Point, where he was contemporary with Jefferson Davis, Lee, Johnston and others, who afterwards played great parts in the Southern rebellion. He graduated with high honors in 1832, being one of the five in his class opposite whose names was placed the star of special merit.

Reporting to General Scott in New York, he was sent out to the Lakes in command of a company of recruits. The first case of cholera which occurred in the United States, in that fatal year, was in his company, on board the steamer *Henry Clay*, on Lake St. Clair. The disease spread so rapidly that the company was broken up by death and desertion, and the young lieutenant, finding himself without a command, went to Washington, and was assigned to duty with the Topographical Engineers. His first work was the survey of Provincetown Harbor, Mass. In 1833 he was transferred to the Military Engineer Department, and put in charge of the rebuilding of the National Road through Maryland, Virginia and Pennsylvania, then the great highway between the East and the West. He resigned from the army in 1836, but continued in the service of the Engineer Department upon the National Road, west of Columbus, Ohio, until 1840; returning to Pennsylvania, in 1837, to construct upon the road the first iron bridge built in the United States. It spanned a branch of the Monongahela River.

In 1840, Mr. Cass entered commercial life in the little town of Brownsville, on the Monongahela River, in Southwestern Pennsylvania. He was successful in his business ventures, and soon began to turn his attention to the transportation enterprises which grew out of the development of the railway system. He established the Adams Express Company, running west from Baltimore, and, on the consolidation of its lines in 1853, became its president.

Afterwards he was made president of the Ohio and Pennsylvania Railroad, the eastern link of what soon became the Pittsburg, Fort Wayne and Chicago Railroad. Of this latter Company he was president for twenty-five years, building the western portion of its road, and aiding in the construction of the Richmond and Fort Wayne Railroad, in Indiana, and the Grand Rapids and Indiana Road, leading from Fort Wayne to the Straits of Mackinaw.

General Cass was one of the Commissioners named by Congress to organize the Union Pacific Railroad Company in Chicago, and was a member of the first Board of Directors of that corporation. He declined the offices of treasurer and president. He shared at the time the popular distrust of the enterprise, and supposed that the Government would be obliged for many years to make appropriations to keep the road in repair. Very few men were far-sighted enough, at that day, to form an idea of the magnitude of the traffic which would be developed by the first railway line across the American continent.

General Cass became a member of the Smith syndicate which took possession of the franchise and debts of the Northern Pacific Company (it had no property) in 1866, the organization of which has been sketched in a preceding chapter. As president of one of the trunk lines running out of Chicago, he felt a warm interest in the development of the Northwest, and was willing to aid any promising enterprise looking to that end. He did not think, however, that the Northern Pacific road could be got through to the Pacific coast in his lifetime. It seemed rather an affair of the next generation. With his old-fashioned, anti-Federalist views of the powers of the general Government, he did not look with much favor on the plan of getting a Government subsidy, upon which his associates in the new board built their hopes of being able to proceed with the undertaking. Still he was willing to take the chances of the project in company with other leading railway managers, and advance money to keep it alive.

General Cass's term of office, as president of the Company, began October 1st, 1872. He was on Puget Sound at the time as a member of the committee of the Board appointed to visit the Pacific coast, to select a location for a terminal city, and regulate the affairs of the Company. The other members were Messrs. Ogden, Billings, Canfield, Wright, and Windom. The committee cruised about the Sound for a week on the steamer *North Pacific*, accompanied by the company's chief engineer, W. Milnor Roberts, looking for a good location for the big city which it was expected would spring up wherever the company elected to fix its tide-water terminus. There were no towns on the Sound at the time worthy of the name; the only settlements, beside the village of Olympia, the capital of Washington Territory, being a few saw-mill hamlets. They first examined Olympia, and decided against it, because the receding tide left its port a wide expanse of mud and mussel shells for half of every twenty-four hours. Steilacoom seemed to be upon a strait rather than on a good roadstead. Seattle, then a petty lumbering place of, perhaps, two score of houses, was objectionable because of its steep hill and lack of level ground for depot, yards and sidings. The other places lower down the Sound were too far distant from the Columbia River. The road from Kalama, on the Columbia, was then under construction northward up the valley of the Cowlitz, and the question to be settled was where it should strike the Sound. Considerations of economy had already begun to press upon the board. They wanted to start building at the nearest point on the Sound where they could find a good harbor, good shore facilities for wharves, and plenty of cheap land to acquire for the future city. So they pitched upon Tacoma, on Commencement Bay, as the place best fulfilling all these conditions. There were a saw-mill and a few houses called by the name, with a background of primitive forest, facing upon a beautiful broad bay, on which the gleaming summit of magnificent Mount Rainier looked down like a pyramid of ivory from the blue heavens. A final decision on the terminus question was reserved until the committee returned to New York. Then the board narrowed down the choice of a terminus to Mukilteo, Seattle and Tacoma, and sent a commission out to carefully examine and report on the three points. The commissioners were R. D. Rice, then the vice-president of the Company for the Pacific coast, and J. C. Ainsworth, who shortly afterwards was made managing director for the Pacific coast, with the functions then exercised by Judge Rice. They reported in July, by telegraph, in favor of Tacoma, where they had acquired, by purchase and donation, a large body of land, and had bargained for the purchase of the saw-mill. Their decision was confirmed by the executive committee, and they were directed to secure the property selected. On the 10th of September, the Board of Directors finally adopted Tacoma as the western terminus of the Northern Pacific Railroad. A company was formed with a nominal capital of $2,000,000, in which the Northern Pacific Company was given one share more than one-half the stock, to lay out the new city and sell its lots and wharf privileges. Subsequently the capital of the Tacoma Land Company was reduced to $1,000,000, and the stock not owned by the railroad company was sold at about fifty cents on the dollar.

Let us go back now to the committee on the Pacific coast. They traveled over ordinary roads to the Columbia River after their cruise on the Sound, went up the Columbia to the mouth of Snake River, and, returning to Portland, hastened back to New York. The tour, together with a trip he had made out to the Red River Valley, convinced General Cass that the Northern Pacific enterprise was more promising than he had supposed; and when he entered on the actual duties of the presidency in December, 1872, he made an enthusiastic address to the board, in which he said: "The Northern Pacific Railroad can be constructed at a reasonable cost; it can be operated and maintained at a less cost than any other railroad across the continent north of the parallel of 33 degrees for obvious and well-known reasons, and it will have, when constructed, and at once, a larger local traffic than any other road can have, west of the 100th meridian of longitude. * * * * There is no problem to solve as to the success of the road after it shall have been completed. The only question after that event will be how any intelligent man of this age should ever have had any doubt about it."

General Cass afterwards gave striking proof of his faith in the Northern Pacific road and country, by converting a large amount of the bonds of the Company which he had purchased, into land in the Red River Valley, and beginning farming operations there on a large scale for the raising of wheat. The valley had been looked upon as worthless for agriculture. It was popularly supposed to be all subject to overflow as far back, at least, as the Maple River, and to be covered with ice and water until late in the spring. The half-breeds and Canadian traders, who were acquainted with the region, so impressed this opinion upon the railroad engineers, that the first surveyed line of the Northern Pacific was run far northward to Devil's Lake, to avoid the supposed swamps between the Red River and the Sheyenne, instead of going straight west to the Missouri. Even later, after a sensible chief engineer had leave to run the straight line, and the Company had adopted it, construction was long delayed beyond Fargo by a division engineer insisting on putting in seven miles of trestle. General Cass bought a large tract of land seventeen miles west of Fargo. He was the first purchaser with a view to cultivating wheat in that region. Mr. Cheney, of Boston, one of the directors of the Northern Pacific Company, bought lands adjoining. Jointly they engaged the services of Oliver Dalrymple, the most noted wheat farmer in Minnesota, to superintend the united estate which became known as the Cass-Cheney farm. The experiment was very successful, and its result was a matter of great importance to the Northern Pacific Company; for as soon as it was demonstrated that large crops of wheat could be raised upon the level lands of the valley, lying ready for the plow, settlers poured in, towns sprang up, and the region soon furnished a heavy traffic to the road.

Of the general measures of the Cass administration of Northern Pacific affairs not much need be said here. The Company was already in financial straits when he entered upon the duties of the presidency. The sale of its bonds had almost ceased. Jay Cooke would sell 100,000, and quietly buy back 90,000 to keep up the market. More than once the directors were compelled to put their hands in their pockets and loan the Company considerable sums to rescue it from embarrassment. The Company was like a ship in a gale; its president's task was to save it from wreck if he could. Retrenchment and economy were the rule of action. The Dakota Division was completed to the Missouri River with the funds furnished by Jay Cooke before the crash of 1873, and the Pacific Division was built from Kalama to Tacoma. There was no money to pay interest after the sale of bonds ceased, and the bondholders were obliged to take a new form of obligation convertible into lands. It was Hobson's choice with them—that or nothing.

Of the bankruptcy proceedings, and the reorganization, we shall speak in the following chapters. President Cass resigned in April, 1875, to take the receivership of the Company, and, after the reorganization in August following, he went to Europe for rest. He first disposed of all his interest in the Northern Pacific, acting on a principle which had always governed his business conduct, never to put money or leave money in any enterprise where he was not on the inside of the management.

CHAPTER XXIV.

THE PANIC OF 1873.

An Unexpected Disaster—Suspension of the House of Jay Cooke & Co.—The Panic and its Results—Closing of the Stock Exchange—Suspension of Banks, Railroads, and Manufacturing Companies—Numerous Failures in all Parts of the Country—Prolonged Effects of the Panic—Serious Shrinkage in Values—Many Branches of Industry Paralyzed—The Northern Pacific Railroad not the Cause of the Failure of Jay Cooke & Co.—Mr. Cooke Loses One Fortune and Makes Another.

THE financial panic of 1873 destroyed the banking house of Jay Cooke & Co., and severely crippled the Northern Pacific Railroad Company. It was the most serious disaster to the business and industry of the United States that had occurred since the crisis of 1837. Sagacious men foresaw its coming, but it burst upon the general public like a sudden and terrific thunder-storm on a bright summer day. The general prosperity of the country was undiminished during the first three-quarters of the year 1873. The revenues of the Government were large, and the public debt was rapidly reduced; manufactories were running at their full capacity; railroad building was prosecuted on an extensive scale in all parts of the country, and trade was brisk and buoyant. All at once, with no other warning than a little stringency in the money market, an extraordinary panic began in New York. It commenced on the 18th of September, with the failure of the New York house of Jay Cooke & Co., followed immediately by the suspension of the Philadelphia house and of the First National Bank of Washington. It lasted about a month, and in that short space of less than thirty days it prostrated thousands of commercial establishments, stopped the wages of hundreds of thousands of laborers, and spread gloom and terror over the entire land. It overthrew the Stock Exchange and numerous banking houses, trust companies, railroad companies, and manufacturing firms. In one day it broke off negotiations of American securities in the money market of Europe, and suspended the construction of all public works dependent on such sales. It swept down the entire banking system of the country, and paralyzed credit. Even the saving banks were obliged to close their doors. The reduction of the public debt, which had been going on at the rate of one million per day, ceased abruptly; the balance turned against the Treasury, and in a single month eighteen millions were added to the debt.

On the first day of the panic the rush to the Stock Exchange was so great that it was feared the galleries would give way under the weight of the multitude. The wildest excitement prevailed in Wall street. The panic was increased next day by the failure of the important banking firm of Fisk & Hatch, long identified with the negotiation of Government securities, and, on the day following, by the suspension of the Union Trust Company, caused by the failure of the Lake Shore Railroad Company to pay a call loan of $1,750,000. Thirty houses in New York and Philadelphia failed on the 19th. On Monday, the 21st, there were eleven more important failures, including three banks. Failures were also numerous in Western cities. On the 20th the New York Stock Exchange was closed by order of its president, and remained closed for ten days. The Gold Exchange also shut its doors. The fever of speculation, on a market which seemed to have no bottom, was checked by the closing of its usual channels of activity. To relieve the market the Clearing House issued $10,000,000 of loan certificates, and the

Government made $10,000,000 more in greenbacks available in New York by an offer to buy bonds to that amount. In three days over nine millions of bonds were sold. A pressure was brought to bear on President Grant to induce him to loan to the banks the reserves of currency in the Treasury. Commodore Vanderbilt proposed to the President to lend the banks $10,000,000 if the Government would lend them $25,000,000. He was asked in reply why he did not pay the call loan due the Union Trust Company by one of his railroads and allow it to resume, and this answer he accepted as a declination of his offer. Failures were numerous during the second week of the panic, among the fallen houses being that of Henry Clews, & Co., financial agents of the Government. All stocks and securities shrunk largely in marketable price, and holders found a considerable part of the supposed value of their property wiped out as with a sponge.

Although the immediate disasters of the panic endured only for about a month, the effects continued for several years. Money was scarce, although the volume of the currency was much larger than it has since been in prosperous times. Hundreds of manufactories stopped operations for the want of a market for their goods. Values of all kinds of property underwent a heavy shrinkage. The growth of cities was checked. Railroad building was almost wholly suspended, and this suspension, together with the stagnation of the building trades, paralyzed the iron industry in all its branches. Farmers hesitated to take the lower prices for their produce, and held on to their crops, thus cutting down the revenues of the transportation lines. Thousands of mechanics, operatives, and laborers were thrown out of employment, and distressed to obtain the means of life. Recovery from the panic was very slow and tedious. The efforts of the country to get back to its former position of prosperity resembled the painful struggles of a man who has fallen over a precipice, and who, bruised and frightened, toils wearily up the steep.

Let us turn now from this brief glimpse of the panic and its consequences to see what happened to the house of Jay Cooke & Co., to which the fortunes of the Northern Pacific Railroad Company were so closely linked. The Northern Pacific Railroad owed the firm about a million and a half for advances made to carry on the work of construction. These advances the firm had expected to get back from the sales of the bonds, but long before the crisis the sales had proceeded very slowly; indeed, they slackened to such an extent in 1872, that the directors of the Company, as we have seen in the last chapter, were obliged to furnish a large sum borrowed on their personal credit to meet its pressing necessities. It was popularly supposed at the time that the Northern Pacific Railroad had wrecked Jay Cooke & Co.'s bank, and the general tenor of newspaper writing was in this direction. Some of the friends of the railroad insisted that it had been wrecked by the wild financiering of the bank. The hasty judgment of the time, unjust as such judgment usually is, held that the railroad had overturned the bank, and that the fall of the bank had brought on the panic. The truth was, that no one cause produced the great shrinkage and crash of 1873, nor did any one financial operation break down the house of Jay Cooke & Co. It could have stood up under its heavy loans to the Northern Pacific if it had not recklessly thrown its money and credit out in many other directions. When the pressure came upon it, it found itself loaded down with a varied mass of paper assets, upon which little or nothing could be realized in a time of trouble.

As to the railroad Company it probably could not have withstood the storm of 1873, even if its fiscal agents had held up under the fury of the general disaster. Like many other railway enterprises trusting to the future development of the country tributary to them for their net earnings, it must have gone into temporary insolvency. Many similar undertakings were abandoned during the long period of doubt and disaster which followed the panic; many were suspended, many went into bankruptcy and remained for years in the hands of receivers. There is no reason to suppose that the Northern Pacific could have escaped a fate which so generally befell other companies then endeavoring to construct railroads in the newer portions of the country. Its declared insolvency was delayed a few months after the panic by the leniency of its creditors, but was inevitable. The legal processes which brought it about were commenced and carried through, as we shall see in the following chapter, by its friends and directors, and resulted in the end in saving it from ruin and placing it upon a secure basis.

The firm of Jay Cooke & Co. made about three millions of dollars out of its agency for the first Northern Pacific loan. Before the financial crash of 1873, Mr. Cooke regarded himself as one of the richest men of the country. He built in the beautiful suburbs of Philadelphia a palace which, for size and costliness, had scarcely an equal on this side of the Atlantic. In this palace, called "Ogontz," he dispensed a lavish hospitality. He had also a summer residence named "Gibraltar," on a rocky cape at the entrance to Sandusky Bay on Lake Erie, which, for the larger part of the year, he placed at the disposal of numbers of clergymen who recuperated their health by boating and fishing, and breathing the pure air of the lake. Mr. Cooke was a generous patron of churches and charities, and had a strong religious bent to his nature. After the crash came he lived for a long time in retirement in a little cottage, in the country, near Philadelphia—to all appearances a broken man. But after getting through the bankruptcy courts, he reappeared in business circles in Philadelphia, occupied his old office on South Third Street, and began to build up a second fortune. Stock transactions and the successful sale of a silver-mine to English capitalists gave him a large sum of money which he so increased by other ventures that he is now currently reported to be worth two millions. His career offers the rare instance of a man losing one fortune and making another when past the meridian of life.

CHAPTER XXV.

REORGANIZATION OF THE NORTHERN PACIFIC COMPANY.

A Period of Doubt and Despondency in the Affairs of the Company—Mileage Completed at the Time of the Panic—A Road Through Vacant Spaces—Falling off of Western Immigration—The Company in Desperate Straits—Its Rescue by a Sagacious Plan of Reorganization—The Bonds Converted into Preferred Stock—Bankruptcy Proceedings Begun by the Directors—Judge Shipman's Valuable Assistance—The Road and Franchise Sold to a Purchasing Committee of the Bondholders.

AFTER the failure of Jay Cooke & Co., there came a long period of doubt and distrust, of inactivity and practical insolvency in the affairs of the Northern Pacific. The sale of bonds had entirely ceased. The days of confidence and enthusiasm, when rapid building was going on, and money for the enterprise was abundant, seemed gone forever. Funds in small amounts for the immediate necessities of the Company could only be borrowed by pledging two or even three dollars of bonds for one of cash. Many of the friends of the enterprise turned against it in its adversity. The newspapers ridiculed it, and said it was "a wild scheme to build a railroad from Nowhere, through No-Man's-Land to No Place." Jay Cooke was denounced for his connection with the sale of the bonds—in some quarters as a hot-headed visionary, in others as a cold-blooded schemer. There was nothing to do now but to shorten sail, and wait for the storm to blow over. The operating force on the road was largely reduced; all salaries were cut down; there was a general abandonment of leases and stock in other companies, and everything was subordinated to the effort to hold on to the main line of road.

The road had been built westward from Lake Superior to the Missouri River, a distance of about 450 miles. It ran first through a forest, and then over vast plains rich in natural fertility, but destitute of population to afford traffic. The little towns that had sprung up during its construction were largely speculative in their character, and had no developed country to sustain them. There had not been time enough for the railroad company to educate the public as to the merits of the region it traversed, and thus secure a large movement of settlers to it. Besides, the financial crash of 1873 checked Western Emigration as well as railway building. The expansive forces of the nation seemed paralyzed. Emigration from Europe almost ceased, and that far more important factor in Western colonization, the native American element, hesitated to seek new fields for its restless energies. The railroad practically ended nowhere. There was little traffic at its terminus at Bismarck, and little to be had at any of the new towns it had created in Minnesota and Dakota. Running expenses could with difficulty be earned. On the Pacific coast the Puget Sound Division, extending from Kalama on the Columbia River to New Tacoma, a raw town in the woods on the shore of the Sound, had just been completed, and was with difficulty made to pay operating expenses; a single mixed train of freight and passenger cars serving for its daily business. The river, sea and Sound transportation lines controlled by the Company through its ownership of stock in the Oregon Steam Navigation Company were abandoned, and the stock, first pledged for loans, was sold in default of payment.

All this time a high rate of interest ($7\frac{3}{10}$ per cent.) was running on the bonds, and causing the Company's debt to grow at the rate of over two millions a year. Interest was funded in principal semi-annually. Matters brightened a little in 1874 out on the line of the road. The experiments of Mr. Cheney, Mr. Cass and others in raising wheat by farming on a large scale proved successful, and settlers began to go into the Red River Valley. The Company was able to earn a little money by hauling lumber to them from the pineries of Minnesota, and taking their grain for shipment at the lake port of Duluth. Still there was no surplus over running expenses, and no prospect of meeting the just demands of the bondholders, who, though patient and forbearing, could not be expected to long rest contented under what looked like an annihilation of their capital. The Company seemed about to plunge into the mire of hopeless insolvency. The great enterprise of a natural highway to the Pacific by the Northern route, marked out by nature for the purpose, appeared to be fast nearing a disastrous end.

From this desperate strait the Company was rescued by a financial scheme of great sagacity and soundness, for which credit was due chiefly to Frederick Billings, then and now a director, and for a time the President of the Company. He conceived what was known as the "Plan of Reorganization," and urged it vigorously and persistently upon all persons interested in the road whom he could reach. What that plan was, and how it was carried into effect, can be well told in the language used by Mr. Billings in subsequently explaining it to a committee of Congress:

> "When the crash came there were three parties in interest: those who had bought the bonds, the holders of the stock, and the owners of what is called the 'proprietary interest.' The bondholders were scattered from Maine to Texas, and at that time numbered about 11,000. This large amount of bonds was outstanding, and there was a considerable floating debt, and the road was but litle more than paying its expenses. The enterprise had reached no objective point; it was necessary to carry it further to make what had been invested in it valuable. But in its then condition no additional funds could be raised, and so, early in the spring of 1875, it was thought best to foreclose the mortgage, to rid the road of its debt, and to place it in condition for further development. All parties in interest were brought

> together, and in order that there might be no prolonged litigation, all interests were harmonized, and in a few months the property was sold under a plan of reorganization which was made part of the decree of foreclosure, and thus speedily taken out of court.
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> "The agreement which harmonized all parties was this: the capital stock, which by the charter was authorized to be $100,000,000, was divided into $51,000,000 of preferred stock and $49,000,000 of common stock. The bondholders were to have $30,000,000 of preferred stock for their $30,000,000 of bonds, and as their bonds drew 7$\frac{3}{10}$ per cent. in gold, the interest was called 8 per cent. currency; two years' interest had already accrued, and it was decided to give to the preferred stockholders the two years' interest that had accrued and 3 years' in advance—5 years of interest at 8 per cent., making 40 per cent., so that each holder of a bond of $1,000 received $1,400 of preferred stock. This absorbed, say, $42,000,000 of the preferred stock, and the remaining $9,000,000 was to be in the treasury for the general purposes of the company. The stockholders were to receive common stock, share for share, were not to be allowed to vote for several years, and were never to have dividends until, in each year, the preferred stock had received 8 per cent., and the remainder of the capital stock, after deducting the $51,000,000 of preferred and the common stock, issued to the stockholders, was to be distributed to the owners of the proprietary interest."

When the plan of reorganization was suggested it was opposed in a great many quarters on the ground that a foreclosure of the mortgage would carry with it the constructed road, the lands earned, and any personal property the Company might have, but not the right to go on under the charter with all the Company's rights unimpaired; that additional legislation and a new grant by Congress, which then it would have been impossible to obtain, would be absolutely necessary. Mr. Billings, who proposed and inaugurated the scheme of reorganization, and Col. George Gray, who after the legal proceedings were commenced became, and has ever since been, the general counsel of the Company, insisted that Congress having authorized the Company to make a mortgage covering everything, including its franchise to be a corporation, there was no doubt that the purchasers under the foreclosure would be just the same Northern Pacific Company, so far as all rights under the charter were concerned, as the organization before the foreclosure; that the right to be, the entity, the spiritual life, would go with the sale just as certainly as the material property; that, in fact, the foreclosure sale and purchase simply sloughed off the mortgage; that if the purchase could be made for the parties in interest, the bondholders, stockholders, and proprietary-interest holders, on some agreed relations, the bondholders taking preferred stock for their bonds, everything would be saved to those to whom it belonged—the Company would be rid of all incumbrance and be ready to raise more money on a good security at the first dawn of good times, and go on with the road to completion—and everybody who would be patient would get his money back with interest, and more too. The case was a somewhat novel one, and Mr. Billings' proposal was assented to, but not altogether believed. Those who believed and those who doubted saw that unless the Company could be cleared of its debt of $33,000,000 it could not raise more money and go on, and unless it did go on, it was sunk in hopeless bankruptcy. The legal question involved has long since ceased to be a question. The courts, and the Government in its executive and legislative departments, have recognized the Company under the reorganization as having all the rights of the original corporation. A meeting of the bondholders was held on the 18th of March, 1873, and a committee appointed to harmonize all interests. The bankruptcy proceedings were commenced on the 16th day of April, 1875, in the United States Circuit Court in New York, and General George W. Cass, who was then President of the Company, was appointed receiver. It happened when the papers were filed, and the application for a receiver was made, that Judge Nathaniel Shipman, of Connecticut, was sitting in place of Judge Blatchford, and so by accident the case came before him, and he had charge of it until its final disposition. The friends of the Northern Pacific enterprise have always felt grateful to Judge Shipman for his thorough appreciation of the situation and prompt disposition of the case. Lawyers seeking to intervene for various bondholders were told that their interests were all guarded and protected by the trustees; and when efforts for delay were made, he said from the bench to the lawyers: "I can only say that if you are anxious and determined to come in as parties in the case, it will make no difference with its disposition. I clearly see that the salvation of this property, and any return to those who have put their money in it, depend upon a prompt foreclosure of this mortgage and a reorganization by all the parties interested, and I am determined, gentlemen, that there shall be no delay in the proceedings here, and no waste of this property. We will now take a recess, but I may inform you that the decree of foreclosure will be signed this afternoon." The decree was accordingly signed, and the sale under it within the shortest time allowed by law was advertised, but postponed for an amendment to the decree, which was given by the judge.

Then the plan of foreclosure and reorganization was carried out by a purchasing committee appointed by the bondholders at a meeting held on June 30th, the committee being composed of Messrs. Johnston Livingston, Frederick Billings, George Stark, James K. Moorhead, John N. Hutchinson, and John M. Denison. On the 12th of August, all the property of the Northern Pacific Railroad Company, except the patented and certified lands, together with all its rights, liberties and franchises, including the right to be a corporation, was sold under the decree of the court, and purchased for the bondholders by the committee. Thus the bondholders, represented by the purchasing committee, became the body politic and corporate known as the Northern Pacific Railroad Company.

By the end of September, powers of attorney representing twenty-six millions, or more than five-sixths of the bonds, were received by the committee and converted into preferred stock; and it was not long before the whole debt was wiped out by this simple and equitable method. Thus all interests were fairly dealt with, and the Company, as reorganized, found itself in possession of about 575 miles of road, free from incumbrance, with an attaching domain of ten millions acres of land, and the right to earn thirty millions more by the completion of the road. The proceedings in bankruptcy were carried forward so expeditiously and with such sagacity and harmony, that the horde of wreckers and plunderers who hang about the courts to pounce upon fallen corporations, armed with petty claims and demands for legal services, were baffled. The cost of these proceedings was trifling. The Company was now upon its feet again, and in a position slowly to regain public confidence.

CHAPTER XXVI.

CHARLES B. WRIGHT'S ADMINISTRATION.

Charles B. Wright Elected President in 1874—His Early Career in Business and Railroad Management—Chosen a Director of the Northern Pacific in 1870—Chairman of the Finance Committee in 1872, and Vice-President in 1873—Financial Straits of the Company after the Reorganization—Making the Road Pay Expenses—Construction Work Recommenced in 1875, on the Pacific Coast—A Connection with St. Paul Secured—Renewed Activity in the Company's Affairs—The Missouri Division Loan—Construction Begun West of the Missouri River in 1879—Mr. Wright's Resignation—Complimentary Resolutions.

WHEN General Cass resigned the presidency of the Northern Pacific Railroad Company in 1874, to act as its receiver in bankruptcy, Charles B. Wright, of Philadelphia, was elected in his place. Mr. Wright was of Quaker ancestry, and born at Wysox, at the head of the Wyoming Valley, in Pennsylvania. In early life he was a merchant and banker in Erie, Pennsylvania. Afterwards he was actively concerned in the building and management of the Philadelphia and Erie Railroad; and later, he was general manager of the united railway companies in the oil regions, in the flush times of the oil excitement, before the days of pipe lines, and when the roads made a great deal of money by hauling oil in barrels and in rude wooden tanks. In these and other enterprises, Mr. Wright had accumulated an ample fortune before he entered the board of directors of the Northern Pacific in 1870, as a representative of his own and other large Philadelphia stock interests. As director and afterwards as Vice-President, he wielded considerable influence in the management of the Company's affairs before he was called to the presidency. The financial management of the corporation was to a large extent in his hands. Especially was this the case when the coming financial crisis began to be felt, and when, with the falling off of the sale of bonds, the Company began to be pressed for money to take care of its floating debt and go on with the work of construction. On more than one occasion, by drawing on his individual means and credit, Mr. Wright rescued the Company from serious embarrassment. He was a member of the committee of the Board which, in 1872, went to the Pacific coast to select a location for a terminal city on Puget Sound, and concurred in the decision to make Tacoma the terminal point. In December, 1872, he was placed at the head of the finance committee, and in March, 1873, was elected Vice-President, resident in New York.

The Company's affairs were at the lowest ebb when Mr. Wright became President. The bankruptcy proceedings began at that time, and ended in the following August, leaving the road wholly without credit in the money markets of the country. Its bonded debt had been wiped out by the conversion of its bonds into preferred stock, but it could not borrow money to go on with the building of the road. Worse still, there was a floating debt of five and a half millions hanging over it. To take care of this debt; to persuade creditors not to sue the Company at law; to make the most out of such assets as the Company had, and at the same time to manage five hundred miles of railroad, running through what was then little better than a wilderness, was the task Mr. Wright undertook. He was well fitted for it by character and experience. Prudent, cautious, and economical, he was at the same time active and enterprising, and always hopeful under the most discouraging circumstances. He succeeded by a policy of rigid economy in making the road pay expenses.

The track ended at Bismarck, on the Missouri River; but for two winters trains ran only to Fargo, and during the third winter the terminus was at Jamestown. The short link of 105 miles on the Pacific coast was finished to Puget Sound, in 1873, with the money received from the sale of the stock of the Tacoma Land Company. At the close of 1876, the directors had the satisfaction of finding that the road had not only paid its way, but had netted a surplus of $300,000. In 1877, the net earnings increased a little; in 1878, they ran up to $480,000.

Thus the income of the Company grew slowly but steadily from year to year, as the country in Northern Minnesota and Dakota began to be occupied by settlers. It could not be said that the road was financially successful at this time, because it paid no interest on the thirty millions invested in its construction, but its affairs began to assume a hopeful phase. There was no doubt now as to the value of the great north-western prairies drained by the Red River and its tributaries. The enormous farms opened by Mr. Cass and Mr. Cheney, and managed by Mr. Dalrymple, had demonstrated that wheat-raising in that region was an industry which could be depended upon to produce regular and profitable returns. These so-called Bonanza farms advertised the country and attracted thousands of settlers. So did the smaller farms for stock-raising, dairying and general agriculture, opened in what is called the Lake Park region in Minnesota, on the line of the Company's road.

After the failure of the efforts to obtain aid from Congress, described in the following chapter, financial plans for the further building of the road began to be talked over in the board. There was, however, little confidence that the public would look favorably upon any securities which the Company might put upon the market; and when the project of a new loan was discussed it was mainly with a view to what the directors themselves and their friends who had stood by the enterprise from the beginning might be willing to subscribe. Two circumstances caused the first construction work after the bankruptcy and reorganization to be done on the Pacific coast. Coal was discovered in 1875, in the foot-hills of the Cascade Mountains, about thirty miles east of Tacoma, and on the line which would be adopted for the Cascade Branch, in case Tacoma should be its terminus. Benjamin Fallows, of Pittsburg, a mining engineer, was sent out to investigate these coal-fields, and his favorable reports led to the belief that a profitable business could be developed for a railroad running to them. Accordingly surveys were made for a road in the fall of 1875, and on May 6th, 1876, the route was formally adopted and a map filed in the Interior Department in accordance with the law. At this time the people of Washington Territory, and especially of Eastern Washington, impatient at the delay in the prosecution of the Northern Pacific enterprise, began to cast about for other means to secure railroad transportation to tide-water. Their Delegate to Congress, Mr. Jacobs, brought forward a plan to take away the land grant of the Northern Pacific Company along its projected Cascade Branch, and give it to another corporation having only an existence on paper. Senator Mitchell, of Oregon, was also pushing a bill in Congress hostile to the interests of the Company in relation to the road down the Columbia River. Matters looked critical. President Wright met the emergency by ordering work to be begun at once on the road to the Puyallup coal mines, which was to be regarded as a portion of the Cascade Branch. The directors at first decided to attempt to place a loan, but afterward reconsidered their action, and determined to build the line without a mortgage by using the net earnings of the

Minnesota and Dakota Divisions. In order to show that the Company was going to commence construction at once, Mr. Wright bought a cargo of railroad iron on his own credit, and shipped it to Tacoma. It took the ship three months to get around Cape Horn, and in the meantime the threatening opposition to the road in Congress and on the Pacific coast was disarmed. The town at the coal mines on the Puyallup Branch was, by vote of the board of directors, named Wilkeson, in compliment to the Company's secretary.

In 1877, the question of a direct connection with St. Paul began to assume greater importance with the increasing freight movement on the Company's main line. Traffic between St. Paul and points on the Northern Pacific had to go around by Thomson Junction over the Lake Superior and Mississippi River Railroad, a route forming substantially two sides of a right angle triangle, the base of which would be a line from St. Paul to Brainerd. The St. Paul and Pacific Railroad Company had already constructed a line from St. Paul to Sauk Rapids, about half the way to Brainerd, in which the Northern Pacific had a controlling stock interest. A charter was in existence for a company to build from Sauk Rapids to Brainerd, and a few miles of grading had been done. Finding that the charter was likely to expire by default, Mr. Wright hastened to St. Paul, bought the charter of its owners, organized a new company called the Western Railroad Company of Minnesota, secured for the Northern Pacific Company five hundred and one of its one thousand shares, and with other members of the board raised the money to build the road. An account of the energetic manner in which Mr. Wright managed this new undertaking is given in another chapter.

With prosperous times in the country and the constant increase in the net earnings of the road, a new spirit of enterprise and confidence began to animate the board of directors. In January, 1878, the project of George W. Wright for a branch railroad from Wadena to Fergus Falls and Pelican Rapids, in Minnesota, was adopted. In May of the same year the President was authorized to have a line surveyed from a point near Bismarck to Deadwood in the Black Hills. Congress was asked to give a charter and a right of way to this line as a branch of the Northern Pacific, and a bill for this purpose passed the Senate, but failed in the House, owing to the unreasonable hostility of many of the members of that body toward all projects for building railroads through the public lands. At the same time a survey was ordered to be made for a branch from the main line of the Northern Pacific, at a point west of the Red River, to the international boundary line. This line was run, and twenty miles of the road subsequently known as the Casselton Branch were built the next year.

During the fall of 1878, numerous financial schemes were discussed for extending the road from the crossing of the Missouri to the Yellowstone, and also for commencing work on the main line on the Pacific coast. In December a plan of construction for the Missouri Division was brought before the board by Frederick Billings, and adopted. It provided for an issue of bonds to an amount not exceeding $2,500,000, secured by a mortgage on the Division from the Missouri River to the mouth of Glendive Creek, on the Yellowstone, and upon all the land of the grant appertaining to that portion of the line. It also provided for an issue of preferred stock of equal amount to the issue of bonds. Subscriptions were to be made to the stock at par, and each share of stock of $100 taken carried with it a $100 bond without any further payment. The subscribers to this loan thus obtained for every $100 they invested securities which have since become worth $200. The Missouri Division loan was speedily taken, and the work of construction west of the Missouri River began early in the spring of 1879. Hostile Sioux Indians roamed over the country at the time, and surveying and grading had to be carried on under the protection of troops. General Rosser, a dashing Confederate cavalry leader in the war of the rebellion, was the company's chief engineer at the time, and was not the sort of man to hesitate at any danger. He made the first survey from the Missouri to the Yellowstone with no military escort, when it was dangerous to cross the river at Bismarck, and when the fort on the opposite bank was constantly guarded by sentries and pickets. The division was more costly to build than the engineer's estimates indicated, owing chiefly to the numerous bridges required over the Heart, Curlew and Green Rivers. Before it was completed the whole amount of the loan was exhausted, and a floating debt incurred of nearly a million more.

On the 24th of May, 1879, Mr. Wright resigned the presidency on account of ill health, feeling that the finances of the Company were at last placed upon a sound basis, and that the further construction of the road was assured. The Company had been rescued from bankruptcy, and brought through a long period of business depression. Its future looked bright, and Mr. Wright thought that the time had come when he could retire from its active management and take needed rest. The directors, on accepting his resignation, passed a series of complimentary resolutions, to mark their appreciation of his services, declaring that " To have successfully brought the Company to its present position has been a task which required talents of no common order; to rebuild the fallen edifice of credit which, when once shaken, is the most difficult of all things to restore; to combine, as he has done, a thorough and searching economy with the full maintenance of efficiency; to have preserved friendship where it existed, and to have conciliated almost every hostile element that was to be encountered—these are indeed laurels to any administrator."

CHAPTER XXVII.

RENEWED APPEALS TO CONGRESS.

Unwillingness of Capitalists to Furnish Money for Completing the Northern Pacific Road—Preferred Stock Sells for 25 to 30—The Directors make a Fresh Appeal to Congress in 1874—Benj. F. Wade's Services—A Bill Guaranteeing Interest on the Company's Bonds—A Hopeless Effort from the Start—Public Opinion Strongly Opposed to Further Aid to Railroads—Failure of the Bill—Bills for an Extension of Time Pass the Senate but Fail in the House—The Company Determines to Rest on Its Charter Rights—Validity of the Entire Land Grant Affirmed by Attorney-General Devens.

THE reorganization of the Northern Pacific Company, although one of the most brilliant achievements known in the history of great corporations, did not regain public confidence for the undertaking. The debt of the Company was wiped out, and it was left in the unembarrassed possession of 550 miles of completed road with the valuable land grant attached to it, and with all the possibilities ahead of the growth of traffic resulting from the settlement of the great wheat belt of Northern Minnesota and Dakota, and of the immense business to result from the ultimate completion of the line across the continent. Nevertheless the capitalists of the money centres looked askance at the enterprise, and the community in general regarded it as Quixotic. From 25 to 30 cents on the dollar was all that could be got in Wall Street for the preferred stock into which the seven-thirty Jay Cooke bonds had been converted under the plan of reorganization. The country was slowly passing through a period of hard times and business depressions following the panic of 1873. Money was scarce, to use the common phrase; though in fact money was plenty, but confidence was scarce. People hung on tightly to their funds, and had no mind to invest them in the securities of railways running out into the wilderness of the far West.

In this state of affairs the managers of the Northern Pacific were at a loss what to do. They could not go on with the road, and to stop for a considerable time seemed likely to gravely imperil the future success of the enterprise as a great continental line. In their dilemma they could think of nothing better than to fall back on Congress for help. They went over to Washington in the spring of 1874, and engaged the services, as counsel, of Benj. F. Wade, of Ohio, who had lately completed his long service in the Senate, and was one of the most conspicuous and influential men at the national capital. In May, a memorial was presented to the Senate and House of Representatives, signed by President Wright, stating the Company's inability to complete the road with the means at its disposal, and asking for such additional legislation as would render available the aid already given by Congress, and secure the accomplishment of the great work for which the charter was granted. There was no time, as the end of the session was close at hand, to get consideration for the memorial and the bill accompanying it; but at the ensuing session, beginning in December, 1874, a strong effort was made to secure the passage of the bill. Governor Potts, of Montana, a Territory vitally interested in the completion of the Northern Pacific road, came on to Washington and put his name with Mr. Wade's to a document entitled "A brief Statement concerning the proposed Legislation to secure the early Completion of the Northern Pacific Railroad." This document was headed "Revival of Industry—Employment of Labor—Development of the Country." It argued, on high patriotic grounds, that it was the duty of Congress to step in with a loan of the credit of the Government to secure the completion of the road. The bill was the old project of a guarantee of interest on the Company's bonds which had been urged unsuccessfully in 1867 and 1868. Its provisions were as follows:

> "*First.* That the Company may issue, in addition to bonds heretofore issued, its 5 per cent. 30-year gold bonds, to the amount of $50,000 per mile of its authorized line of road, the entire issue to be delivered by the Company to the Secretary of the Treasury.
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> "*Second.* That as often as the Company shall complete and equip a section of twenty or more miles of new road, and the same shall have been accepted as first-class by Government Commissioners, the Secretary of the Treasury shall deliver to the Company $40,000 of its authorized 5 per cent. bonds for each mile of the section thus completed; each bond so delivered to the Company to bear a guarantee by the United States Government of the payment of the interest thereon. The remaining $10,000 of authorized 5 per cent. bonds per mile (equivalent to 20 per cent. of the entire amount to be issued to complete the road) shall be retained in the United States Treasury *as a reserve interest fund*, to be used as hereafter named.
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> "*Third.* That as often as the Company shall complete a 20-mile section and apply for a corresponding instalment of its guaranteed bonds, it shall deposit with the Secretary of the Treasury $50,000 of its 7 3-10 first mortgage bonds for each mile of the section thus completed. These 7 3-10 first mortgage bonds are to remain in the United States Treasury, in trust, to secure, *first*, the United States Government for its guarantee of interest; and, *second*, the bondholders of the new 5 per cent. bonds, the *principal* of which will not bear the Government guarantee.
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> "*Fourth.* That, to provide and secure the payment into the United States Treasury of a sum of money equal to the guaranteed interest, as it shall fall due: 1st, the Company shall, within sixty days after the approval of this Act, convey and surrender to the United States Government its entire land-grant, earned and to be earned, aggregating about fifty million acres, in trust, to be sold, subject to existing equities, under the direction of the Secretary of the Interior, and to actual settlers on agricultural lands at the minimum price of $2.50 per acre, the entire net proceeds of sales each six months to be paid into the Treasury of the United States fifteen days before the maturity of the next semi-annual instalment of guaranteed interest; 2d, every six months the entire net earnings of the road for the previous six months, or so much thereof as may be necessary, shall be paid into the Treasury of the United States, accompanied by a sworn statement of the business of the road during the same period; 3d, if at any time the proceeds of sales of land, together with the net earnings of the road, and any other

sums paid over by the Company, shall be insufficient to meet the next payment of guaranteed interest, then the Secretary of the Treasury shall sell sufficient of the Company's 5 per cent. guaranteed bonds, retained by him as security (mentioned in paragraph *Second*), and apply the proceeds to meet the deficiency.

"*Fifth.* That all surplus funds in the United States Treasury arising from the sale of land, in excess of current interest payments, shall, from the outset, be paid into a Sinking Fund for the payment of the principal and interest of the bonds authorized by this act; and from and after the year 1888, the Company shall make the yearly payment into the Sinking Fund equal to one per cent. of the entire issue of guaranteed bonds.

"*Sixth.* That any holder of the outstanding 7-30 first mortgage bonds of the Company, issued prior to the passage of this Act, may exchange them for the Company's 5 per cent. guaranteed bonds, bearing interest from January 1, 1878, on the terms to be fixed in the Act.

"*Seventh.* That Congress may fix and determine fares, tolls and charges on the Northern Pacific Railroad, provided that such government control shall not impair nor defeat the security sought to be given by this Act."

Arguments and appeals, statistics and statements, letters, newspapers and documents were brought to bear upon Congress, with no result. The offer to practically surrender the whole land grant produced little effect. Public opinion was stubbornly hostile to any further aid being given by the Government to railroads in the West, and Congress did not dare to face the current of this strong sentiment. The bill did not even reach a position for discussion in either house. It was, in effect, smothered at its birth.

Further efforts at Washington were now confined to urging an extension of time for completing the road. In February, 1876, a bill passed the Senate, without much opposition, prolonging the limit eight years, which, under the interpretation placed by the Interior Department upon the existing legislation, would have carried it to July 4th, 1887. A favorable report was made upon the bill by the House Pacific Railroad Committee, and it went over as unfinished business to the next session. The excitement over the disputed presidential election and the electoral count in the winter of 1876–7, made it difficult to bring any new measures before the House. The bill could not be got on the calendar so as to be reached in regular order. A decision of the Speaker, that under the rules a two-thirds vote was necessary to take it up for final passage, was, in this condition of affairs, fatal. It was late at night of the last day of the session. The bill, just as it had been passed by the Senate, was reported and moved. There was very little, if any, opposition to it. It asked for nothing but time. It asked for neither money nor bonds. A great majority of the members elected to the House were unquestionably in favor of the bill as a measure of public policy, and an act of justice to a large body of innocent stockholders who had been prevented by the financial panic from completing the road on time. These stockholders, over 10,000 in number, constituted a strong influence in the constituencies of twenty-one States and Territories. On the call of the roll 120 members did not answer their names. They were absent from the House, worn out by protracted sessions and excitement. The bill failed to get the two-thirds vote necessary to take it up, though it received a large majority of the votes of the members present.

The President of the Company, with the general counsel, the special counsel, and a number of the directors, made another effort at the succeeding session, beginning in December, 1867. Exhaustive hearings were had before the committees of both houses. A bill passed the Senate granting an extension of ten years, but containing some provisions objectionable to the Company concerning the line down the Columbia River. This bill went to the table of the House. An attempt was made, near the close of the session, to take it up for consideration and amendment, out of its regular order, but the required two-thirds vote could not then be obtained. The House

Committee, after great delays, and hearings protracted to a vexatious extent, by parties desiring to seize the Columbia River portion of the line, for the benefit of a branch to the Union Pacific road, finally reported a bill, extending the time for constructing the main line, which bill went upon the calendar of the House, and so over to the next session. It was not feasible to reach this bill during the short session, which ended on the 4th of March, and another attempt was therefore made to suspend the rules and to take from the Speaker's table for amendment and passage the extension bill, which had passed the Senate. The session was so near its end the bill could not be reached in the ordinary course of business. The motion for a suspension of the rules, requiring a two-thirds vote, was lost, though 133 voted in its favor, to 104 against.

During the session of 1879–80, the Pacific Railroad Committees in both houses reported extension bills, but no further action was taken upon them. The time for the completion of the road had now expired, and also the year of grace allowed by the charter before Congress could take any action in reference to the land grant. The Company was energetically pushing the road forward from both ends. The gap remaining to be built June 30, 1880, was at that time about 1,000 miles. It was wisely determined to rest on the Company's rights under the charter, and in future to ask nothing from Congress, and to do nothing in Washington beyond taking proper measures to defend those rights. The Attorney-General of the United States, General Devens, now on the Supreme Bench of Massachusetts, had decided, in 1879, "That the time specified for the completion of the road would not expire until July 4th, 1879; and, further, that if such were not the true construction of the various provisions of the Acts of Congress, it must be held that until

Congress takes steps to declare a forfeiture of the grant it remains in full force and effect; and that in either event the grant to-day must be held to be the same as it existed on the day when it was made and accepted by the Company."

The Company was satisfied that no action adverse to its interests would be taken by Congress, so long as it was energetically at work completing its line. Besides, Congress was precluded by the charter from taking possession of the land grant and restoring it to the public domain. Its power in the premises was limited to doing "any and all acts and things which may be needful and necessary to insure a speedy completion of the road." There could manifestly be no reason for interfering when the road was being built as fast as practicable. This was the attitude of the Company in the years following until the completion of the road. It was fully endorsed by a report from the Judiciary Committee of the House in 1882, and none of the numerous bills introduced to declare the grant forfeited have ever obtained from either Senate or House any consideration other than the formal one of a reference to a committee under the rules.

CHAPTER XXVIII.

PRESIDENCY OF FREDERICK BILLINGS.

Mr. Billings' Birth and Education—He Becomes a California Pioneer of 1849—A Lawyer in San Francisco—His Early Interest in the Northern Pacific Project—Declines a Nomination for Congress—Returns to the East—Chosen a Northern Pacific Director in 1870—Organizes the Land Department—Chairman of the Executive Committee—Elected President in 1879—A General First Mortgage Executed—Agreement with a Syndicate of Bankers—The Bismarck Bridge—St. Paul Terminal Facilities—General Offices and Brainerd Shops—Mr. Billings' Resignation—Improved Condition of the Company.

FREDERICK BILLINGS, who succeeded C. B. Wright in the presidency of the Northern Pacific Railroad, was born at Royalton, in Vermont, September 27th, 1823. Twelve years later his father moved to Woodstock, Vt., where the family home has been ever since. He entered the University of Vermont at Burlington, in 1840, and, graduating in 1844, immediately commenced to study law, and was admitted to the Bar early in 1848. In January, 1849, Mr. Billings started for California by way of the Isthmus of Panama, arriving at San Francisco April 1st of that year. He began at once the practice of law by himself, but was soon joined in partnership by Archibald C. Peachy, and the firm became Peachy and Billings. When California adopted a State Constitution, and in January, 1850, passed out of the military government, General H. W. Halleck, who had been secretary of that government under General Mason, resigned from the army, and was taken into the firm, having specially in charge the matter of Spanish and Mexican land titles, with which he had made himself familiar. Still later, Trenor W. Park became a partner, and the firm was afterwards Halleck, Peachy, Billings and Park. The firm was a very successful one, and continued until the early part of 1861, when Mr. Billings went to England as the attorney of General Fremont in connection with the Mariposa estate. Returning to America in 1862, he was married in New York City in March of that year, to Miss Julia Parmly, and returned to California, where he remained till November, 1863. With impaired health, he then came back to New York, but in March, 1865, taking a voyage by the Straits of Magellan, he again tried California, and in pursuit of health went by land to Oregon and Washington Territory, making a trip up the Columbia River and through Puget Sound. He became so impressed with the greatness and resources of that region, and with the necessity for a more direct communication with the eastern side of the continent, that subsequently, when he gave up his home in California in March, 1866, and came back to Vermont, he went to Washington to aid the Northern Pacific Railroad Company in its effort to obtain a bond subsidy from the government. This was in 1867. Mr. Billings had at that time no business interest whatever in the enterprise, and was simply carrying out the promises he had made to people in Oregon and Washington Teritory, to aid as far as he could the construction of this overland route. No one could have lived as long as Mr. Billings had on the Pacific coast, and made the journey so many times between New York and San Francisco by way of the Isthmus of Panama, without becoming profoundly interested in everything tending to bring the world east of the Rocky Mountains nearer, whether it was by an overland stage, a pony express, or a railroad. Mr. Billings was one of the original promoters of the Overland Stage Company, and in 1866 became largely interested, financially and otherwise, in the Atlantic and Pacific Railroad Company, chartered June 17th, 1866, by the United States Government, to build from Springfield, Missouri, to the Pacific Ocean on the line of the 35th parallel. Its charter was very similar to that of the Northern Pacific, and Mr. Billings was a director in this company for many years.

Mr. Billings left California with profound regret. He was one of the pioneers, had been the legal adviser of General Mason's military government, was identified with the growth of San Francisco and the State, connected with many public institutions, and prominent in public affairs. His professional and business life had been a success, and when he came away there was no one at the Bar of San Francisco who had been there as long as himself. He had been offered a nomination for Congress, but had declined it, and was urged by the Pacific Coast delegation in Congress for a seat in the Cabinet of Mr. Lincoln, who had said, just before he was shot, that he should appoint him. In 1866, by a unanimous vote of the legislature, he was urged for a seat in President Johnson's Cabinet. California had been Mr. Billings' home for the best part of his life, and he longed to remain there, but under the advice of physicians he came back to Woodstock, Vermont, which he has since made his home, although spending most of his time for fourteen years in New York in the service of the Northern Pacific Company.

In 1869, Mr. Billings purchased of Hiram Walbridge one of the original twelve interests in the Northern Pacific enterprise, and at the first election thereafter, and after the contract was made with Jay Cooke & Co., he came into the board of directors, March 9th, 1870, and was made chairman of the land committee. By this time the Company had obtained the legislation amending its charter so as to give it the right to mortgage the road and land grant and franchises, and with Jay Cooke & Co. as its fiscal agents, was able to go ahead with the active work of building its road.

Mr. Billings went with President Smith and several other directors in August, 1871, to locate the crossing of the Red River of the North. The road was then finished only to the Crow Wing River, about twenty miles beyond Brainerd. There was then no settlement where the crossing was fixed, and where Fargo and Moorhead are now. The excursion was extended to the second crossing of the Cheyenne, fifty-eight miles beyond the Red River. Mr. Billings also went with President Cass and several other directors to Oregon and Washington Territory in September, 1872, for the purpose, among other things, of locating the Northern Pacific terminus on Puget Sound. In March, 1873, he went with R. D. Rice, of Maine, then Vice-President, and W. G. Moorhead, a director, to San Francisco. The three had been appointed a committee to confer with persons relative to enlistment of new capital, and to receive and dispose of any proposals for constructing road on the Pacific side. They were accompanied by William Milnor Roberts, the Company's engineer-in-chief.

Mr. Billings organized the land department, and, as chairman of the land committee, or managing director of the land department, remained in charge of the land grant until the reorganization in September, 1875. He has continued in the board of directors ever since his first entry, and only one member of the present board, Benj. P. Cheney, of Boston, has held office as long. At the time of the reorganization, in 1875, he was appointed chairman of the executive committee, of which he had been a member since 1872, and remained in that position till his election as president, May 24th, 1879, on the resignation of Mr. Wright. Mr. Billings' connection with the reorganization scheme, of which he was the author, has been described in a preceding chapter devoted to that important event in the history of the company.

On his advice the directors determined to recommence construction operations on the Pacific coast. They first thought of building from Portland to Kalama, in order to secure an all-rail route from the Oregon metropolis to Puget Sound, but they wisely deferred the execution of this part of their general project. There was evidently no hurry about paralleling a navigable river with a railroad while so much of the interior line remained to be built. They, therefore, determined to begin at the junction of the Snake and Columbia rivers, and build eastward across the great plain of the Columbia to Lake Pend d'Oreille.

The plan for raising money to build the Pend d'Oreille Division differed somewhat from that adopted for the Missouri Division loan, Mr. Billings being the author of both, and was more favorable to the Company. The mortgage covered the road and the land grant appertaining to it. Bonds to the amount of $20,000 per mile —the Division being 225 miles long—were authorized, bearing interest at six per cent., and subscribers at first received a gratuity of $70 in preferred stock for each $100 of bonds they took at par, but before the loan closed better terms were obtained by the Company. In the case of the Missouri loan $200 of bonds and stock issued produced $100 in cash; in the case of the Pend d'Oreille loan $170 of bonds and stock produced $100 in cash. The difference in the terms of the two loans was probably a fair index to the improving credit of the company. The total amount of bonds issued under the Pend d'Oreille Division mortgage was $4,500,000. Construction work on this Division began in October, 1879, under the supervision of General J. W. Sprague, the Company's general agent, and manager on the Pacific coast.

In the fall of 1880, while the Missouri and Pend d'Oreille Divisions of the Northern Pacific main line were under construction, it seemed wise to commence building on the Yellowstone, and to be prepared for work on the whole line. President Billings had already caused grading to be begun in Hell Gate Cañon, west of the Rocky Mountains, in order to occupy that important defile in advance of the Utah Northern Company, which was building in that direction, and also between Wallula and the Snake River crossing in Washington Territory. While previously it had been considered that a general mortgage upon the whole line and property and franchises, including the franchise to be a corporation, would not be a success for the reason that the public would be afraid that in so large a scheme disaster might come again, and that therefore it was almost an absolute necessity to adopt the policy of division mortgages, it now seemed that the Company was so accredited with the public, and the enterprise was so much better understood, that the policy of a general mortgage covering the entire line and the whole property of the Company would be the true one to adopt.

The first banking firm which took an active interest in the matter of a loan to provide means for the completion of the road, was that of Winslow, Lanier & Co., of New York. Mr. John W. Ellis, of that firm, had been asked by Jay Cooke in 1869, to join him in placing the first loan. Mr. Ellis, who then lived in Cincinnati, had been connected with Cooke in the sale of Government bonds, and, while on a visit to him at his summer home at Gibraltar, on Lake Erie, was urged to take hold of the financial scheme for building the Northern Pacific. He declined, believing that the project was premature, although he then thought its ultimate outcome would be a great success. After the Northern Pacific broke down, financially, in 1873, Mr. Ellis kept up a quiet and watchful interest in its affairs until the railroad revival, which began in 1878. In the summer of 1880, his particular attention was drawn to it by a conversation with Mr. Wadsworth, the Vice-President of the Chicago, Milwaukee and St. Paul Railroad, who had a high opinion of the future of the enterprise. At about the same time he had, on different occasions, conversations with two prominent army officers, Generals Terry and Ruggles, who had been stationed in the northwest, and who spoke in very favorable terms of the value of the Northern Pacific land grant. General G. W. Cass, formerly President of the Northern Pacific Company, also commended the enterprise to the firm. Winslow, Lanier & Co. then made up their minds to look closely into the matter, and to that end President Billings was invited to call at the bank. He did so, and several hours were spent in consultation on the subject of a general first mortgage loan. After further investigation this firm concluded that the project was a sound one, and determined to request the house of Drexel, Morgan & Co. to join them in it. That firm did not at first regard the matter favorably. Mr. Fabbri, one of its partners, said that Mr. J. B. Williams, then second Vice-President of the Northern Pacific Company, had already called his attention to the subject, but that he had not thought it worth examining. After considering the matter for a few weeks, however, Drexel, Morgan & Co. determined to join Winslow, Lanier & Co. in their own behalf, and in that of their allied houses, Drexel & Co. of Philadelphia, and J. S. Morgan & Co., of London. In the meantime numerous consultations had taken place with President Billings, the result being that Mr. Ellis and Mr. Fabbri spent a great deal of their time, for over a month, in perfecting the details of a mortgage loan of forty millions. They were assisted in preparing the legal documents by J.

C. Bullitt, of Philadelphia, while Mr. Billings was aided in the negotiations which he commenced and carried through on the part of the Company by A. H. Barney, one of the directors, and in the preparation of the legal documents connected therewith by the Company's counsel, Colonel George Gray. After the negotiation was brought to an end and the terms of the loan were fully agreed upon, an offer was made by Winslow, Lanier & Co. and Drexel, Morgan & Co. to the firm of A. Belmont & Co., to join them in their contract with the Northern Pacific Company, which was accepted. These three firms, the contractors for the loan, then formed a syndicate for the sale of the bonds, including among their associates many of the leading bankers of New York and other cities.

The mortgage was dated January 1st, 1881, and provided for the issue of $40,000,000 of bonds bearing six per cent. interest, payable semi-annually, the principal falling due in 1921. The terms of the mortgage only permitted the issue of the bonds at the rate of $25,000 per mile on sections of completed road which had been examined and accepted by the Government—a limitation which gave rise to serious embarrassment in the prosecution of construction work, and would have delayed the completion of the road one or two years, had not the difficulty been overcome at a later day, as related in detail hereafter, by the creation of a new company, which used its credit to obtain large advances of money for the management of the Northern Pacific Company. In order to prosecute the work of construction with any degree of rapidity, it was necessary to have at command funds to do heavy grading and blasting, build bridges and open tunnels far in advance of track laying. It was assumed that the bonds issuable against the unencumbered mileage east of the Missouri River and on the Pacific coast would amply provide for these wants, but this proved a miscalculation. The agreement with the syndicate of bankers who took the loan was, in its main features, as follows: The syndicate took $10,000,000 of bonds at 90, as of January 1st, 1881, and were given options to take $10,000,000 more during the year 1881, at 92½, to take a third $10,000,000 during 1882 at 92½, and to take the fourth $10,000,000 at the same rate during 1883. These options they exercised. The Company further gave the syndicate, as a part of the consideration for taking the bonds, five per cent. upon the amount taken in preferred stock. The contract proved a very profitable one for the syndicate, which sold the bonds above par, but at the time it was made it was thought by the Northern Pacific directors to be a favorable one for the Company, considering the state of its credit.

President Hayes, General Sherman, General Hancock and many other prominent men of the country, wrote letters of congratulation to Mr. Billings, on the success of the financial scheme which ensured the completion of the road. From this time the work went on vigorously. The actual prosecution of construction on the road was of the greatest service to the Company in warding off the hostile attacks in Congress and elsewhere. The Company claimed, as we have already shown, not only that its land grant was not subject to forfeiture, but even if it were, on grounds of equity and fair dealing there should be no attempt to take it away.

In 1880, it was determined that a bridge should be built across the Missouri River, at Bismarck. The river shoaled badly, particularly on the west side, was constantly making shifting sand-bars, and the crossing by a transfer boat was circuitous, difficult and expensive, and in winter often impossible by reason of ice. George S. Morison, an expert in bridge building, was employed to examine and report upon the whole subject, in connection with General Adna Anderson, who had been selected by the President as engineer-in-chief, and appointed by the board in February, 1880. After the reports were presented to the board, President Billings was authorized to contract for a bridge and approaches such as they recommended, and to employ Mr. Morison to superintend its erection. The contract for the substructure of the bridge was made January 28th, 1881.

In 1880, under the authority of the board, Mr. Billings made a traffic contract dated October 20th, with Henry Villard, President of the Oregon Railway and Navigation Company, by which the Northern Pacific secured, on favorable terms, connection with Portland, Oregon, down the Columbia River from its Pend d'Oreille Division then under construction. The O. R. & N. Company running boats on the river, and building a railway from Portland to the Northern Pacific at Wallula, agreed to so take care of the Northern Pacific Company's business between those two points as to justify the postponement of the construction of that expensive part of the Northern Pacific line, until the entire line east had been completed.

It was during Mr. Billings' administration also that a traffic contract was made with the St. Paul, Minneapolis and Manitoba Company, by which the Northern Pacific Company acquired the right to use the tracks of the St. Paul, Minneapolis and Manitoba Company for 75½ miles from Sauk Rapids to St. Paul, and so obtained an entrance into Minneapolis and St. Paul with its own trains; the provisional agreement having been made November 18th, 1878, and the formal contract August 1st, 1879. In the arrangement, the Northern Pacific secured, without cost, about seventeen acres of valuable land in St. Paul for depot purposes and terminal facilities. This contract failed in many respects of accomplishing its purpose, and the Northern Pacific Company afterwards found it advisable to secure an independent line from Sauk Rapids to Minneapolis.

During Mr. Billings' administration the general office buildings in St. Paul were commenced and planned on such a scale as to accommodate under one roof the various departments. The extensive general machine shops at Brainerd, Minn., which, now completed, are not excelled in efficiency by any railroad shops in the country were, also commenced. There was also a contract made with the proprietors of the city of Superior, in Wisconsin, by which they were to convey one third of their interests in the city to the Northern Pacific Company, in consideration of the extension of the main line eastwards from Thompson Junction as far as Superior within the year 1881. The work was commenced and finished as agreed. Mr. Billings commenced and finished forty miles of the Casselton Branch, commenced the Fargo and South-western, and secured the ownership of the charter, land grant, and county subsidy of the Northern Pacific, Fergus Falls and Black Hills Railroad.

It may be noted, further, that during Mr. Billings' administration the immense Indian Reservations, existing by order of the President of the United States, made in April, 1875, for the benefit of various tribes of Indians (Arickarees, Gros Ventres, Piegans, Mandans, and Blackfeet), extending far north and south of the Missouri River, and on both sides of the Yellowstone, were reduced, by an order of President Hayes, on July 13th, 1880. Nearly all of the land south of the Missouri, and east and west of the Yellowstone, embracing nearly 300 miles in length and nearly 200 miles in width, and covering about 150 miles of the line of the Northern Pacific, was thrown open to civilization. It was shown that the Indians rarely came into this great tract, and then only for hunting, and that the reservations north of the Missouri were more than ample for their uses. But for this timely act of President Hayes, settlers would have been kept out of this great area, the railroad could have acquired no title to its lands within it, and, so far as local business is concerned in the region in question, might as well have run through a desert.

Mr. Billings, before and during his administration as President, made several arguments before the Pacific Railroad Committees of the two houses of Congress, one of which on the "History and Equitable Rights of the Northern Pacific Railroad," delivered April 15th, 1880, before the House Committee, was printed for general circulation.

Mr. Billings resigned the presidency in June, 1881, when a controlling interest in the company's stock passed into the hands of Henry Villard and the capitalists he represented, and it was thought desirable by them to secure a unity of management between the Oregon transportation lines directed by Mr. Villard and the Northern Pacific system. His health had been seriously impaired by hard work, and he was glad of the opportunity to follow the advice of his physician and take a long rest. He continued in the board, however, and as a member of the executive committee. Before Mr. Billings left the presidency, the plan of reorganization had been recognized as valid by courts and the Government, and had become a complete success. Of the old bonds, nearly every one had been exchanged for preferred stock. The old stockholders had received common stock, as agreed, and the proprietary-interest holders had received the stock provided for them. About the latter there had been litigation, but it was at an end. The preferred, which sold once as low as $8 per share, had risen to $80, and the old bondholders, who had converted their bonds into preferred stock, and held on, could see they were to lose nothing of principal and interest. The common stock, which had sold at $1.50, was quoted at about $50. Such had been the change of opinion towards the Company that capital was ready to invest in its bonds and stock, and arrangements had been made to provide funds for its completion. Thus, at last, the Northern Pacific, which had seen so many dark days in its history, had become so strong in its position, so firmly seated in the faith of the public, and so sure of its future, that its steadfast friends felt that their patience had been rewarded and their faith in the great enterprise fully justified.

On the retirement of Mr. Billings his associates in the directory signified their appreciation of the value of his services by the formal adoption of a resolution providing for the engraving of his portrait for the new certificates of stock, and in other ways.

CHAPTER XXIX.

TEMPORARY PRESIDENCY OF A. H. BARNEY.

Mr. Barney's Birth and Education—Visit to Michigan—Early Interest in Transportation Problems—Deputy Collector of the Port of Sacketts Harbor—The Patriot War—Engages in the Commission and Shipping Business at Cleveland and Buffalo—Organizes the United States Express Company—A Member of Several Railroad Purchasing Syndicates—Director and Treasurer of the Northern Pacific Railroad—His Connection with the Original Interests Agreement—Elected President in 1881 to Fill a Temporary Vacancy—The Agreement with the Crow Indians.

MR. BILLINGS' resignation of the presidency was hastened, as we have seen, by ill-health and the desire and necessity for rest. Mr. Villard was not ready to take the direction of the Company's affairs into his own hands before the next annual meeting of the stockholders, to be held in the latter part of the ensuing September. It was accordingly determined in the board that A. H. Barney, long a director and one of the participants in the Original Interests Agreement of 1867, should act as president to fill the vacancy, and that Thomas F. Oakes, who had just come into the board to represent the Villard interest, should be chosen vice-president, and enter at once upon the executive duties of the office, which included the prosecution of the construction work on the line and the general direction of the traffic and land departments.

Mr. Barney was born in Ellisburg, Jefferson County, New York, in 1816—the youngest son of John Barney, who emigrated from Brattleboro, Vermont, in 1800. He was educated at the Belleville Academy at the same time that Judge G. F. Comstock, late of the Court of Appeals, Joseph Mullen, Judge of the Supreme Court, and

Hiram Barney, late Collector of the Port of New York, were preparing for college at that school. At the age of nineteen he went to Michigan, returning the following year to Jefferson County, New York, where he was appointed deputy collector of the Port of Sacketts Harbor. At that time all of the surplus of wheat, corn, flour, pork, and beef of North-eastern New York was shipped by steam and sail from Sacketts Harbor to Oswego, and thence by canal to New York. During his term of office as deputy collector, what was known as the Patriot War was inaugurated—a movement first organized by a secret society, formed for the purpose of enlisting men and money for an invasion of Canada. The invaders believed that thousands would join their standard as soon as it was planted upon Canadian soil, and that the British Provinces would eagerly welcome the opportunity for annexation to the United States. They were immediately defeated. The American troops guarding the frontier, to prevent reinforcements from joining the Patriots, were largely controlled in their movements by the collectors of the ports on the Lakes, and the young collector at Sacketts Harbor suddenly found his post one of great importance.

In 1843 Mr. Barney's brother, D. N. Barney, and himself formed a copartnership with Eldridge Merrick, of Clayton, Jefferson County, for a general forwarding and commission business, purchasing timber and staves, and shipping them to Quebec and Liverpool for a market. At that time Mr. Merrick owned a large fleet of vessels, which were sold to the firm, and a business house was opened at Cleveland, Ohio, under the name of D. N. Barney & Co. The firm were the owners of about twenty sailing vessels and two steamers, the *Chesapeake* and *Empire*. The *Empire* was the largest steamer ever run upon the Lakes up to that time, and was the first modeled after the sharp steamers, fore and aft, that were then running between New York and Albany. After years of successful business, D. N. Barney removed to Buffalo, establishing there the house of D. N. Barney & Co., and also organizing the Bank of Lake Erie. J. B. Waring was admitted as a member of the firm at Cleveland, doing business under the name of Barney, Waring & Co. D. N. Barney and E. G. Merrick were the Company, and A. H. Barney was the senior partner of the Cleveland house. During the second year of the copartnership, Mr. Barney invented and constructed the first grain warehouse built of plank, upon a model plan that has since been followed in the construction of all grain warehouses of large dimensions in this country. The Buffalo and Cleveland branches of the firm did an extremely profitable business, measured by the standard of profits of those days.

Mr. Waring withdrew from the Cleveland and Buffalo copartnerships, and D. N. Barney removed to New York, where soon after he became largely interested in the express business. In 1854 he organized the United States Express Company, and was elected its president. Soon thereafter he was elected president of Wells, Fargo & Co.'s Express, doing business between New York and San Francisco by way of the Isthmus of Panama. After two or three years of profitable business, the carrying trade upon the Lakes became unsatisfactory, and A. H. Barney sold the smaller vessels of his firm, loaded the larger vessels with American timber, staves, oil-cake, and such other articles as he believed could be sold at a profit, and sent them with their cargoes to England. In company with D. C. Pierce, he built the brigs *Kershaw* and *D. C. Pierce*, and sent them with the others to England for a market. At the English ports the vessels obtained cargoes for the Danube. The trade did not prove very profitable. Some of the vessels were sold in England, and some returned to the Lakes. The *D. C. Pierce* was taken by a Confederate cruiser during the Civil War, and destroyed.

In 1854 Mr. Barney was elected vice-president of the United States Express Company, and took upon himself the entire executive management. He was one of the parties who purchased a controlling interest in the New York Central Railroad, and elected W. G. Fargo vice-president. After about a year, two of the parties sold their stock to Commodore Vanderbilt, which gave him, with the stock he then held, the control of the road. He was elected president and immediately doubled the stock of the road, constructed the bridge at Albany, and succeeded thereafter in paying regular semi-annual dividends.

Mr. Barney was one of a small party that purchased the control of the Cleveland and Toledo Railroad. He was offered the presidency of the road, but declined, and secured the election of his personal friend John W. Newell. Soon after the road was consolidated with the Buffalo and Erie and Cleveland and Erie roads and the Michigan Southern, making what is now known as the Lake Shore Railroad. Mr. Newell was elected general manager, and has held that position until the present time. In October, 1862, Mr. Barney was one of a party of five gentlemen that purchased the franchise of the Winona and St. Peter Railroad of Minnesota. To save the charter; ten miles of road were to be constructed before the first day of January, 1863. He was placed in charge of construction. The road ran through mountains and rocks, and over deep ravines, one of which required over eight hundred feet of bridging, forty feet in height. Nevertheless, the ten miles were completed, and accepted in time to save the charter. The road was built the following year for a distance of sixty-two miles, bonded, and then sold to the Chicago and Northwestern Railroad, Mr. Barney's party holding the bonds at the rate of $20,000 per mile on the sixty-two miles constructed, and the title of the lands earned. Mr. Barney was afterwards one of a syndicate composing what was called the United States Telegraph Company, which purchased the control of the Western Union and of the organization called the Overland Telegraph Company, with a franchise to construct a line of telegraph to the Pacific coast. All these companies were consolidated, and Wm. Orton was made president of the new corporation, which preserved the name of Western Union. In 1872 Mr. Barney joined William B. Ogden, General G. W. Cass, J. Gregory Smith and others, in the Original Interests Agreement, which created twelve proprietary shares controlling the franchises of the Northern Pacific Railroad. In 1870 he was elected a director and treasurer of the Company. He resigned both positions in April, 1873, on the approach of the financial difficulties which soon afterwards beset the Company and threw it into insolvency. When the storm had passed over and better times came, he was a member of the syndicate that furnished the money to construct the Missouri and Pend d'Oreille Division. In 1881 he again became a director in the Northern Pacific Company, and was appointed chairman of the finance committee, and, in connection with President Billings, negotiated the general mortgage loan which ensured the further construction of the road. He was also chairman of a special committee on lands, and succeeded in persuading the board to advance the price of the Company's lands east of the Missouri and on the Pacific slope from $2.60 to $4 per acre. The most important proceeding during his brief term as president was the negotiation with the Crow Indians for the right of way through their reservation, fronting on the Yellowstone River for a distance of over two hundred miles. The Company had the right under its charter to build through the reservation, and the Interior Department recognized that right, but the Company thought it wise to satisfy the Indians by the payment of $25,000. Mr. Barney was succeeded as president by Henry Villard, on September 15th, 1881, but remained a member of the board of directors.

CHAPTER XXX.

HENRY VILLARD AS JOURNALIST AND RAILWAY MANAGER.

Mr. Villard's Birth and Education in Germany—He Emigrates to the United States at the Age of 18—Studies Law and Writes for the German Papers—Masters the English Language and becomes a Journalist—Goes to the Pike's Peak Gold Mines—His Career as a War Correspondent from 1861 to 1864—Secretary of the American Social Science Association—Visits to Europe—Returns to America to Represent German Bondholders of Defaulting Railroads—Receiver of the Kansas Pacific Railroad—President of the Oregon and California Railroad—Acquires Control of the Oregon Steamship Company and the Oregon Steam Navigation Company—Proposition to the Union Pacific Company—Organization of the Oregon Railway and Navigation Company—Prosecution of Mr. Villard's General Transportation Plan.

HENRY VILLARD was born in the old imperial city of Speyer, on the Rhine, in 1835, and was the second of three children, the other two being sisters. His father was in the judicial branch of the civil service of Bavaria, and at the time of his birth was stationed in a small town near Speyer. The father received successive promotions, necessitating frequent changes of habitation in Rhenish Bavaria. He finally became presiding judge of the district court in the town of Zweibrücken, where the son spent the greater portion of his childhood, from 1839 to 1849. In the interval between his sixth and eighth years he attended the public elementary school in that town, and then at the age of eight entered the Latin school, or Gymnasium, in which he remained for six years, going through its several classes. The revolutionary outbreak, which temporarily disturbed not only public, but also school life, in Southern Germany in 1848 and 1849, decided his father to send him for a time to a French college at Pfalzbourg, in Lorraine. There he remained a year, and in the fall of 1850 entered the Gymnasium at Speyer, from which he graduated in the summer of 1852. He next visited the universities of Munich and Wurzburg.

In consequence of the political oppression, and the revolutionary agitation growing out of it, which prevailed in Germany in 1831 and 1832, an uncle and several brothers of his father (the former of whom held a high judicial position) emigrated in those years to the United States, settling near St. Louis, in and about the town now known as Belleville, St. Clair County, Illinois. They were followed by members of other branches of the family, so that gradually the greater number of relatives on his father's side became settled in the United States. Through the regular correspondence of these relatives, he became much interested in this country, and being possessed of a lively imagination and a restless temperament, he made up his mind, while pursuing his University studies, to seek his fortune on this side of the Atlantic. He accordingly came to America in October, 1853. It was his intention at once to seek his relatives in Illinois; but, from a variety of circumstances, he did not carry out this purpose for a year. He remained some time in New York, and then found his way to Chicago, whence in November, 1854, he went to St. Louis, and thence to Belleville, spending the winter on a large farm belonging to one of his father's brothers, near Belleville. While in Belleville he amused himself by writing occasional contributions to the local German paper, which were so favorably received by the editor as to impress him with the belief that he might earn his bread as a journalist. In the spring he decided to read law, and with that purpose entered an attorney's office in Belleville. He soon found, from the fact that Belleville was almost exclusively inhabited by Germans, and only the German language was used in the society in which he moved, that he would not readily acquire the

English language if he remained there. Through the influence of a relative he obtained an opportunity to continue his law studies in Peoria, Illinois. After remaining a few months there, the recollection of his former stay in Chicago induced him to return to that city, which he looked upon as a promising field for a young man.

The dry methods by which he was to acquire a knowledge of the law did not attract the young man, but rather repelled him, and the recollection of his journalistic efforts in Belleville led him to try his hand at writing letters for the newspapers. He first sent his letters, descriptive of Chicago and the West, to some German weeklies in New York, and they were readily accepted. He continued his journalistic labors at various western points, but the conviction settled upon him that the German press offered but a limited opening for success, and that if he wished to achieve distinction, he could only do so by qualifying himself to become a writer for the English press. He had acquired the verbal use of the English language with comparative rapidity, but still had very little practice in writing it. He worked very hard to perfect himself in the written use of it, however, and in the spring of 1858 he first sought admission to the columns of eastern papers printed in the English language. The result was an engagement to report the course of the political campaign between Lincoln and Douglas in Illinois, in the summer of 1858. Mr. Villard traveled over the State till late in the fall with the two candidates, reporting their joint discussions. Upon the conclusion of the campaign he proceeded to Indianapolis to report the proceedings of the Indiana Legislature, in which an exciting senatorial contest was in progress, and wrote letters to the Cincinnati *Commercial* and other papers from that point. He was expelled from the reporters' gallery of the Indiana

House on account of some severe comments in his letters on the conduct of one of the members. During the same winter he spent some time at Springfield, the capital of Illinois, writing letters about the Legislative proceedings there.

In the spring of 1859 Mr. Villard went to Cincinnati, and made an engagement with the editor of the *Commercial* to go to the newly-discovered gold region of Colorado, and write a series of letters for that paper. He reached Leavenworth in time to take passage on the first stage across the plains, run by the Leavenworth and Pike's Peak Express Company, which left early in April for Denver. He explored during the summer the Territory of Colorado, as far as it was accessible at that time—a portion of the time in company with Horace Greeley and Albert D. Richardson, who visited the Territory that summer, the former being on his way overland to California. He made two trips to the Missouri River that summer, and on finally leaving Colorado, started late in November with a party on horseback for the East. The party were caught in violent snow-storms, and after severe privations, reached the settlements of Eastern Kansas. Mr. Villard spent the winter of 1859-60 in St. Louis preparing for publication a volume, which was issued the next spring, on the new Pike's Peak mining region, compiled chiefly from his letters in the *Commercial.*

Mr. Villard attended the National Convention at Chicago which nominated Abraham Lincoln for President, and spent the summer and fall of 1860 in active work as a correspondent, traveling, attending mass-meetings, and reporting the progress of the political campaign in the West. Late in the fall he found time to work up statistics concerning the extent of the trade across the plains to Colorado and New Mexico, with a view of influencing the course of the projected railroad to the Pacific, which were published in the New York *Herald* in the fall of 1860. Mr. Frederick Hudson, then managing editor of the *Herald*, learning of Mr. Villard's personal acquaintance with Lincoln, engaged him to go to Springfield and spend there the time between the election in November and the departure of the new President for Washington in the following February, in observing the movements of politicians. He telegraphed his reports daily to the *Herald*, and under the rules of the Associated Press they were sent to the papers throughout the country. Mr. Villard was enabled to get an inside view of the intrigues for cabinet positions, and for the control of the policy of the new administration. By invitation of Mr. Lincoln he accompanied him as far as New York, on his journey to Washington. After spending a few days at New York, he went to Washington, and established himself there as a political correspondent of eastern and western papers, his personal acquaintance with the President giving him a conspicuous position at once among the newspaper correspondents stationed at the capital.

He remained in Washington as a correspondent until the first Bull Run campaign, when he accompanied the army to the field, and in its retreat after the battle. After returning to Washington, he proceeded to the West, and joined the forces in Kentucky under the command of General Buell, whose campaign in Kentucky, Tennessee, Mississippi and Alabama he witnessed till the fall of 1862. He next joined the army of the Potomac and reported the unfortunate campaign of General Burnside, which culminated in the disastrous battle of Fredericksburg. He then joined the Hilton Head expedition to South Carolina, and remained there three months. When the first attack was made upon Charleston in April, 1863, Mr. Villard was on Admiral Dupont's flag-ship the *Ironsides*, and was the only correspondent in the battle. He went North immediately after the engagement.

His success at Charleston earned him a three-weeks' leave of absence, during which he went to Boston, and made the acquaintance of the lady who afterwards became his wife, Miss Fanny Garrison, a daughter of the great anti-slavery agitator and leader, William Lloyd Garrison. He again went West, joining General Rosecrans. Here he became acquainted with General Garfield, who at that time was Rosecrans' chief of staff. While with the army in Tennessee, he contracted a severe malarial fever which came near costing him his life, and incapacitated him for a long time from work of any kind. Going to the Yellow Springs of Ohio, and afterwards to Cincinnati, he finally became convalescent, and hastened back to the field, rejoining Rosecrans at Chattanooga, before the battle of Chickamauga. From Chattanooga he went to Washington, and, in connection with Horace White and Adams S. Hill, started a newspaper correspondence bureau, to furnish news from the capital, and from the seat of war in Virginia, to a combination of important papers outside the New York Associated Press. This was the first instance of an arrangement, which afterwards became quite common in Washington, by which a number of papers in cities widely distant from each other are served with the same dispatches and letters from important news centres. Mr. Villard's combination consisted of the *Boston Advertiser*, *Springfield Republican*, *Cincinnati Commercial*, *Chicago Tribune*, and *St. Louis Democrat*. This was in December, 1863. He remained at Washington till Grant began the Wilderness campaign, when he took the field at Culpepper Court House as a correspondent, representing the news bureau above referred to, and witnessed the battles of the campaign, and the siege of Petersburg.

In September, 1864, Mr. Villard returned to Europe for the first time since coming to this country, and visited his relatives in Germany. On the 1st of April, 1865, he sailed from Liverpool, designing to take part in the spring campaign in Virginia. On landing at Boston he learned of the collapse of the rebellion, and of the assassination of President Lincoln. For a time he furnished correspondence from the East to the *Chicago Tribune*, of which his former associate, Horace White, had become the managing editor. Going to Washington, he spent some weeks in the preparation of the mortality statistics of the war, from the records of the Government archives, intending to make them the basis of a book, which, however, was not completed.

Mr. Villard was married in Boston, on January 3d, 1866. Returning soon after to Washington, he wrote for the *Chicago Tribune* during that winter. In July, 1866, he accepted an offer from the *New York Tribune* to go to Europe and report the Austro-Prussian war, which had then just broken out. By the time he had crossed the Atlantic, however, the six weeks' struggle had come to a close, and there was nothing left for him to do but to visit the battle-grounds of Koeniggratz and Sadowa, and also the cities of Vienna and Berlin, to observe the effects of the war, and the political changes resulting from it. He stayed in Germany till April, 1867, and then went to Paris to furnish correspondence from the International Exhibition, remaining till its close. He was joined in June, 1867, by his father-in-law, William Lloyd Garrison, who soon afterwards made a tour through Great Britain, in the course of which distinguished honors were showered upon him as the leading representative of the anti-slavery movement in America, which had brought about the freedom of the colored race in the Southern States.

From Paris Mr. Villard went to Switzerland, and afterwards to Munich, to attend the death-bed of his father, who had in recent years become a judge of the Supreme Court of the Kingdom of Bavaria. The following winter he spent in Paris, writing letters for the *Chicago Tribune.* In the winter of 1868, he made a journey, in the interest of that paper, to visit John Stuart Mill at Avignon and to Italy to describe the eruption of Mount Vesuvius. He returned in June to the United States, where, for a time he was engaged in writing editorial articles for the *Boston Advertiser*. Shortly afterwards he was elected Secretary of the American Social Science Association, to which he devoted his energies until 1870. The war of 1870 between France and Germany greatly interested him, and he went back to his native country, partly to observe the struggle, and partly for the benefit of his health, which was considerably impaired. Returning to America in February, 1871, he resumed his position as Secretary of the American Social Science Association. In September of the same year he again went to Europe, and remained till April, 1874. It was during this period that his connection with railroad enterprises began. While living at Wiesbaden, he interested himself in the negotiation of American securities in Germany, and became acquainted with leading bankers in Frankfort and Berlin. After the financial panic of 1873, many American railroad companies became bankrupt, and default was made in the payment of the interest on their bonds held in Germany. Committees were organized for the protection of the bondholders. Mr. Villard was asked to join several of these committees. Consenting, after some hesitation on account of the condition of his health, he soon found that most of the work was thrown upon his shoulders, because of his knowledge of the English language, and of American affairs. In April, 1874, he returned to America to represent the interests of his constituents. His special purpose was to go to Oregon and close a contract, the preliminaries of which had been arranged at Frankfort by a special agent sent there by Ben. Holladay, the then president of the Oregon and California Railroad Company, which Company had made default on its first mortgage bonds in the summer of 1873. He took with him a competent German engineer, R. Koehler, who afterwards became general manager of the Company. On his way to the Pacific coast, Mr. Villard, in connection with his companion, examined a number of western railroads.

He reached Oregon in August of 1874, and was at once very much impressed with the beauty of the scenery and the great natural resources of the country. He was struck, moreover, with the peculiar natural divisions of the country, which clearly defined and prescribed the only possible transportation lines. He observed that Western Oregon consists mainly of one great valley, that of the Willamette River, and that Eastern Oregon and Eastern Washington are only accessible, owing to the impassable character of the Cascade Range—the continuation of the Sierra Nevada of California—by the Columbia River. He perceived that the control by transportation lines of the valleys of these two rivers would insure the substantial control of the traffic of the entire vast region watered by them and their tributaries. In the light of the natural conditions he conceived the plans, which he found the opportunity to carry out, however, only in the course of years.

The Oregon and California and the Oregon Central Railroad Companies, on behalf of whose mortgage creditors Mr. Villard visited Oregon, had already virtual possession of the Willamette Valley by their existing lines on each side of the river. It happened, moreover, that the same banks and bankers that had negotiated in Europe the bonds of the Oregon and California Railroad Company had also a hold as mortgage creditors upon the steamer line, then forming the only connection between

Oregon and the rest of the world. Mr. Villard, of course, saw the desirability of the control of this outlet by sea in combination with that of the interior transportation lines. His connection with the controlling European capitalists naturally opened the way for the realization of his plans.

The contract to close which Mr. Villard went to Oregon was a compromise between the Oregon and California Railroad Company and the bondholders, based on a reduction of the current interest charge. In less than a year it became apparent that the Company would not be able to comply with the agreement, in consequence of which Mr. Villard was deputed to proceed again to the United States, and to enter into a new arrangement, under which the Company was to surrender absolutely the control of the properties to the bondholders. This was effected, and Mr. Villard thereupon became president of the Oregon and California Railroad Company and the Oregon Steamship Company, in 1875.

In 1873 Mr. Villard was also elected a member of a committee at Frankfort-on-the-Main, representing the bondholders of the Kansas Pacific Railway Company, which the crisis of that year had also forced to make default in the payment of interest on its bonds. A compromise was entered into between the Company and the committee under which the interest on the bonds was to be funded for three years. In 1876 the Company was unable to resume payment of interest, and requested Mr. Villard to act as one of the receivers, whose appointment then became necessary. On receiving the assent of the Frankfort committee of bondholders, he accepted the position in connection with Carlos S. Greeley, of St. Louis. He continued in that capacity until the fall of 1878, when both receivers were removed by order of the court which had appointed them. The cause of their removal was the discord that had broken out between them.

As stated, Mr. Villard had been originally appointed as the representative of the mortgage creditors, and Greeley as that of the Company. Mr. Villard felt in duty bound to protect, in his official capacity, the interests of his constituents, and to prevent unreasonable and unnecessary sacrifices of the principal and interest of their bonds. The directors of the Company, from financial straits, entered into a sort of alliance with the Union Pacific Railway Company, or, rather, its then controlling spirit, Jay Gould, who soon managed to have matters entirely his own way in the Kansas Pacific. He made several contracts with the New York committee, representing the Kansas Pacific bondholders, but broke them as fast as they were made, in the hope of frightening the bondholders into larger concessions. Having failed to win Mr. Villard over to his plans, he made war upon him by abuse and slander, but Mr. Villard stood resolutely by the bondholders. A protracted struggle ensued in the courts, the outcome of which was that the bondholders obtained much more than under the successive compromises which Gould had disregarded. When Mr. Villard was appointed receiver, the price of the bonds, in whose behalf the foreclosure suit had been commenced, was about 40; when the settlement with the Company was made, they stood much above par. This result gave him great prestige, which proved of much advantage to him in his subsequent financial enterprises.

He held fast to his general project of uniting all the transportation lines of Oregon, both rail and water, under one control, but was not able to make much progress towards the execution of the plan until 1879, owing to the great depression in financial and industrial affairs prevailing in Europe as well as the United States. His first effort was to obtain money to replace with new steamers the old vessels of the Oregon Steamship Company, and to continue the construction of the Oregon and California Railroad. He did not succeed in the latter direction, but gradually secured the funds for new iron steamships. This had hardly been accomplished when an opposition line was started, which so cut down the earnings of the Company that its European owners became discouraged, and urged Mr. Villard to find American purchasers for it if possible. He made up a syndicate composed of a small number of personal friends, who had been with him in other enterprises, and bought the properties of the Company for it at a moderate price.

Mr. Villard's next step was in the direction of securing for Oregon what he thought would be of the greatest benefit to all its interests—railroad communication with the East. He did not at first look to the Northern Pacific line for this, because of its discredited condition, but turned his attention to a connection with the Union Pacific line. He was well acquainted with the parties controlling the Union Pacific Railway Company. He knew that that Company originally intended building a line to Oregon, and that it had surveyed a line ten years before. He put himself in communication with the managers of the Union Pacific, and made a formal proposition to them to join him in carrying out his general plan. He offered to raise half the money that he thought necessary for it, if they would raise the other half. An agreement was reached and executed; a million of dollars was subscribed as a start, and Mr. Villard left with the subscription paper in his pocket for Oregon in April, 1879.

His first purpose was to occupy one or the other bank of the Columbia River, with a view to the construction of an extension of the Union Pacific to Portland, Oregon. He had already, the year before, instituted a cursory examination of the banks of the Columbia River, with a view to ascertaining the character and cost of the requisite work. The engineer in charge had made a rather unfavorable report as to the possibility of a road on the south bank of the river. Hence, on arriving at Portland, Mr. Villard put another surveying party in the field to examine the north bank. The result was also discouraging, in that it indicated the great difficulty and cost of a line on that side likewise.

At that time the transportation business of the Columbia Valley was entirely in the hands of the Oregon Steam Navigation Company, and carried on by separate fleets of steamboats, running respectively on the lower, middle, and upper Columbia, and connecting with each other by means of portage railroads around the principal natural obstructions to the navigation of the river at the Cascades and the Dalles. The Company was then just entering upon a stage of great prosperity in consequence of the increase of down river freights by the development of wheat farming on a large scale in the upper Columbia country. Its stock was worth about forty cents on the dollar in the spring of 1879. A controlling interest in its stock had been purchased in 1872, as has been stated in a former chapter, by the Northern Pacific Company, and on the bankruptcy of Jay Cooke & Co., this stock, having been largely hypothecated for loans, was relinquished to creditors of the railroad, or divided as an asset among the creditors of the banking firm, and thus passed into the hands of a large number of holders. The Oregon Steam Navigation Company was managed by Captain J. C. Ainsworth, S. G. Reed, and R. R. Thompson, all then residents of Portland. Mr. Villard thought it best to see first the upper Columbia country, and especially the Walla Walla region, before deciding definitely upon his course. His observations on the trip resulted in the conclusion that it would be wisest to obtain, first of all, control of the Oregon Steam Navigation Company in order to keep the railroads, to be built in the valley of the Columbia, free from competition from the start. Accordingly, he entered into negotiations for this purpose with the president of the Navigation Company, Captain J. C. Ainsworth, for the purchase of the stock of himself and associates. An agreement to this effect was speedily reached, immediately after the execution of which Mr. Villard returned to New York, arriving on June 9th. He reported his doings to the Union Pacific parties, and, true to the understanding with them, offered them half an interest in his contract for the purchase of the control of the Oregon Steam Navigation Company's stock, and in the new Company, under the name of the Oregon Railway and Navigation Company, by which he intended to absorb both the Oregon Steam Navigation Company and the Oregon Steamship Company, of which latter he had already acquired control, as heretofore explained. After much hesitation and delay, his offer was declined—the greatest mistake ever made by the parties controlling the Union Pacific.

Mr. Villard had six months' time in which to comply with the terms of the Ainsworth contract. But he felt the need of a long rest in Europe, and was determined that all the conditions—including the payment of $2,000,000 in cash, the organization of the Oregon Railway and Navigation Company, the creation of a mortgage, the issue of stock and bonds, and numerous other details—should be complied with by July 1st, so that he could sail soon thereafter. Though he had thus but three weeks, he accomplished all in that short time, with the intelligent and devoted aid of numerous influential friends.

The Oregon Railway and Navigation Company was incorporated on the 13th of June, 1879. It had authority to issue $6,000,000 of bonds and $6,000,000 of stock, the greater portion of the proceeds of the former of which served to acquire the properties of the Oregon Steamship Company, and to carry out the contract with Captain Ainsworth. All the stock then issued went as a bonus with the bonds. Mr. Villard was elected president of the new Company, and J. N. Dolph, of Portland, vice-president. Its first Board of Directors was composed of Henry Villard, Artemus H. Holmes, William H. Starbuck, and James B. Fry, of New York, and George W. Weidler, J. C. Ainsworth, S. G. Reed, Paul Schulze, H. W. Corbett, C. H. Lewis, and J. N. Dolph, of Portland.

Mr. Villard sailed on July 10th, and returned early in November. A friend boarded the steamer to welcome him, and, in reply to a question, pulled out a broker's statement showing that the Oregon Railway and Navigation stock, which had been given away as a bonus in July, was already then selling at 95.

Mr. Villard, before sailing, had made all necessary arrangements for commencing the realization of the general project, fully matured in the meantime, for building a trunk railroad line along the south bank of the Columbia River, and, in connection with it, a fan-like system of feeders covering Eastern Oregon and Washington Territory. During the summer the preliminary engineering work was accomplished, and construction had actually commenced on his return.

The Oregon Railway and Navigation Company has since made a proud record as the most successful transportation company in the country. It started with net earnings in 1879 of about three-quarters of a million. It is expected that in the fourth year of its existence it will earn four times that amount. It has expended more than $20,000,000 of actual money in building over 500 miles of standard gauge road, and in largely increasing its other—real and floating—properties. It is the only railroad and navigation company in this country that since its first issue of bonds has never borrowed a dollar for any purpose, but has raised all its capital by selling its stock at par to its stockholders.

CHAPTER XXXI.

PRESIDENCY OF HENRY VILLARD.

Relations of the Oregon Railway and Navigation Company with the Northern Pacific—A Threatened Conflict of Interests—Traffic Contract Agreed Upon—Villard's Plan to Acquire Control of the Northern Pacific—History of the Blind Pool—A Romance of Wall Street—Formation of the Oregon and Transcontinental Company—Its Objects—A Legal Controversy over an Issue of Northern Pacific Common Stock—Henry Villard Elected President of the Northern Pacific—Thomas F. Oakes Elected Vice-President—Important Financial Aid Afforded by the Oregon and Transcontinental—Building of Branch Lines.

IN the preceding pages an account has been given of Mr. Villard's efforts and aims in organizing the Oregon Railway and Navigation Company, and of the financial measures taken in order to insure its rapid development from a mixed transportation system consisting of steamships, steamboats, and a small disconnected railroad mileage into the more comprehensive and solid system, with a preponderance of railroad lines, it has become since 1879. But it was not only the needs of the new enterprise in these respects that called for his attention and action. It became also necessary, at an early stage, to provide against danger from possible competition. The principal prospective danger lay in the possible conflict of the interests of the Oregon Railway and Navigation Company with those of the Northern Pacific Railroad Company. As early as the spring of 1880, Mr. Villard entered into communication with the executive officers of the Northern Pacific Railroad Company in order to suggest and bring about, if practicable, such agreements between the two corporations as would avert future collisions. Two objects he was especially anxious to secure; first, the granting of the right of way for the line along the south bank of the Columbia River to be built by the Oregon Railway and Navigation Company; and, secondly, a traffic arrangement under which the Northern Pacific would use this line as its outlet to tide-water on the Pacific coast, instead of building a line of its own. At that time the construction of the Pend d'Oreille Division, from the mouth of the Snake River to Lake Pend d'Oreille, had already been determined upon by the Northern Pacific, on the advice of the then managing director on the Pacific coast, Captain J. C. Ainsworth. The management of that Company believed with him that the transportation facilities then existing along the Columbia River were sufficient until the main line should be completed across the continent to a junction with the Pend d'Oreille Division. Moreover, it was expected that the formal acquisition of many millions of acres of rich lands in eastern Washington, by the construction of the Pend d'Oreille Division, would largely improve the credit and help the finances of the Company. Still, it may be assumed that if the Northern Pacific management had known or anticipated before the financial measures adopted for the construction of the Pend d'Oreille Division had become irrevocable, that a new and probably rival interest would acquire control of the navigation of the Columbia River, a different course would have been adopted. Mr. Villard encountered certain apprehensions from this source in his endeavors for the traffic arrangement already referred to. It was, in fact, not favorably looked upon, but he finally satisfied President Billings, who had in the meantime succeeded President Wright, of the wisdom of his propositions, and, as a preliminary measure, it was agreed that Director J. D. Potts should visit the Pacific coast, and with Mr. Villard go over the ground to be covered by the new transportation lines, with a view to finding a practicable basis for a mutually satisfactory arrangement. Mr. Potts met Mr. Villard on the Pacific coast, as agreed, and an understanding was reached by them as to the general basis of the arrangement to be entered into between the two companies. Upon their return to the East, the work of elaborating a formal contract was taken in hand by both sides. After weeks of deliberation, a definite draft of a contract was perfected and accepted by the boards of directors of both companies, and executed on October 20, 1880. Mr. Villard had not succeeded in all respects in this contract. He aimed at a positive and permanent engagement on the part of the Northern Pacific to use the Columbia River line of the Oregon Railway and Navigation Company, and to abstain from the construction of a line of its own. He only succeeded in obtaining an agreement that the Northern Pacific should use the Oregon Railway and Navigation line, until it could build one of its own. Circumstances soon arose which brought him directly face to face with the danger of competition, threatened by the provision of the contract leaving the Northern Pacific free to build a line along the north bank of the Columbia whenever it was able and saw fit.

The tide of prosperity which had set in throughout the country upon the resumption of specie payments had risen to its greatest height in the spring and summer of 1880. The investing public was very favorably disposed toward all new railroad enterprises, and it was comparatively easy to raise large sums for any new undertakings promising reasonable success. Impressed with this situation of affairs, Mr. Villard conceived the project of acquiring a controlling influence over the Northern Pacific, by furnishing it with the means for completing the main line, through a syndicate to be formed by him of his American and European business friends. He first approached President Billings with reference to the project in the summer of 1880, upon his (Mr. Villard's) return from his visit to the Pacific coast above referred to. He felt confident that he could easily raise from $10,000,000 to $20,000,000 on Northern Pacific first mortgage bonds, and made an offer to this effect to President Billings. This was while the final discussion regarding the traffic contract was progressing, and Mr. Villard naturally felt that his offer of a large amount of capital to the Northern Pacific would render its management more favorably disposed toward the conclusion of the contract. As already related in another chapter, President Billings and the Northern Pacific board, in the light of the growing demand, so to speak, by the speculative public for new rail road enterprises, were already considering, when Mr. Villard made his proposal, the possibilities of financial operations for the same object. President Billings, in fact, had entered into formal negotiations with some banking firms, for the negotiation of general first mortgage bonds—a fact of which, however, Mr. Villard had at first no knowledge. When he learned of these negotiations, he pressed his own proposals as strongly as was in his power, but to no effect. The syndicate contract was signed, which fact, and the intention of the syndicate to offer to the public a large portion of the entire issue of the general first mortgage bonds at the earliest practicable moment, Mr. Villard learned soon afterward. He was fully alive to the probable consequences of the large financial resources thus assured to the Northern Pacific. What with this, and his knowledge of the reluctance with which the Northern Pacific executive had entered into the traffic contract, and the purpose openly and frequently avowed during the negotiations of securing an independent outlet, either along the north bank of the Columbia, or by the Cascade Branch to the Pacific Ocean, for the Northern Pacific main line, whenever the capital could be obtained to provide it, Mr. Villard was persuaded that the time had come for decisive action, and that this action must be in the direction of the actual control of the Northern Pacific, and the establishment of an identity of ownership between it and the Oregon Railway and Navigation Company. Such an arrangement he believed essential to the future prosperity of both corporations. To carry out this idea, Mr. Villard conceived the project of forming a new company, which should acquire, in the first place, a controlling interest in the respective stocks of the two corporations, and, secondly, should possess sufficient pecuniary resources for the construction of a full system of branch lines subsidiary to the main lines of the two other companies, to protect the latter from encroachments by rival interests and at the same time produce such development of local traffic along the entire transcontinental line as would naturally increase the intrinsic value of the Northern Pacific and Oregon Railway and Navigation stocks.

Mr. Villard had sufficient experience in Wall Street to know that if he gave notice to the public of his intention to form a Company for such a purpose he would never be able to secure his first and main object—that is, to acquire by purchase in the open market a controlling interest in the stocks of the two companies at reasonable figures. He therefore determined to buy the stocks first, and to form the Company that was eventually to own them afterward. But even in this operation, involving, as it did, the purchase of hundreds of thousands of shares of stock, representing a money value of tens of millions of dollars, success depended altogether on the greatest possible secrecy. Mr. Villard, therefore, exercised every precaution to conceal himself as a buyer, using exclusively his private means and credit. Of his numerous friends and followers but very few, on whose discretion he could absolutely rely, knew of his movements. In this way he very quietly took out of the market large lines of the desired stocks during the months of December, 1880, and January, 1881. Having thus obtained the virtual control of the market as regarded the three stocks he was buying, he felt sure that complete success was only a question of further investment. Early in February, 1881, he decided to call on his friends for funds for further purchases—in such a manner, however, as would not yet disclose the real object he sought to accomplish.

Having absolute faith in the soundness of his project, and feeling justified in taking large responsibilities, as the assumption of such was in the direct interest of all concerned, and was the only sure means of accomplishing his purpose, he decided to make the strongest appeal any man could make to the confidence of others in him by asking his friends and followers to place their money in his hands, without telling them the use to which he intended to put it. Accordingly he issued a private circular to about fifty persons, informing them that he desired them to subscribe toward a fund of $8,000,000, to which he would himself contribute a large part, in order to enable him to lay the foundation of a certain enterprise, the exact nature of which he would disclose thereafter. The effect of the announcement was marvelous. The very mystery of it appeared to be an irresistible attraction. The result was that one-third of the persons appealed to signed the full amount asked for before the subscription list could reach the other two-thirds. Then an eager rush of applications for the right to subscribe ensued, and within twenty-four hours after the issue of the circular more than twice the amount offered was applied for. The allotments were made as fairly as possible, but hardly one of the subscribers was satisfied with the amount allowed him. All wanted more, and Mr. Villard's offices were crowded with applicants pleading for larger participations, including some of the first bankers of the city. In some cases the disappointment led to angry protests. The demand far exceeding the supply, the subscriptions commanded twenty-five per cent. premium at once, and rose to thirty, forty, and fifty per cent. premium as soon as the allotment was announced; that is, people were willing to pay as high a premium as five hundred dollars for every thousand dollars they were permitted to pay into the hands of Mr. Villard, without having the least idea as to the use he would make of their money. The $8,000,000 subscribed for and allotted were called for payment in three installments, running from February 15 to April 2, and notwithstanding the great stringency in the money market at that time—money commanding a premium of from one-eighth of one per cent. to one per cent. a day—the payments were promptly met, without a single exception.

The subscribers received a personal receipt from Mr. Villard, reading as follows: "Received this day from ———— the sum of ——— dollars, as his contribution to, and which entitles the holder hereof to a proportionate interest in, the transactions of a Purchasing Syndicate, to be formed, with a capital of $8,000,000, by agreement in writing of the parties in like interest, for the acquisition of properties, real, personal and mixed, for the purpose of the sale thereof to or the consolidation thereof with The Oregon Railway and Navigation Company, or The Oregon Improvement Company, or both, or to serve as the basis for the formation of a new Company. It is understood and agreed that the undersigned shall account to the holder hereof for the use of the moneys for which this and like receipts are given on or before May 15, 1881, but not sooner, and that the holder hereof shall participate equally in all the profits and benefits of every description with all other persons in like interest in proportion to said contribution. This receipt is not transferable except upon the written consent of the undersigned."

For reasons of policy, the accounting promised in the receipt for May 15 was postponed until June 24, on which day the subscribers to the "Purchasing Syndicate" met by invitation in the offices of Mr. Villard, when he formally disclosed for the first time his full scheme for the formation of a third Company for the double object already explained. The project was so well received that Mr. Villard's simultaneous invitation to the subscribers present to join him in a new subscription for the further amount of $12,000,000, to pay for additional amounts of Northern Pacific and Oregon Railway and Navigation stocks already in the meantime purchased by him, was generally responded to.

The payments on account of the second subscription were made in seven separate installments, extending from July 6, 1881, to April 1, 1882, when the last installment, of twenty per cent., amounting to nearly $2,500,000, was received, thus completing the two subscriptions under which a total of more than $20,000,000 in money was actually paid in. Payments on all of the seven calls were made with remarkable regularity. Although the original issues of receipts for large subscriptions were exchanged in most cases for a great number of receipts for smaller amounts, in order to enable bankers and brokers to deal in them, every one of the receipts in circulation was finally returned for cancellation.

The new Company was formally organized immediately after the meeting of June 24, above referred to, under the name of the Oregon and Transcontinental Company. Its immediate object, to-wit, the union of the control of the Northern Pacific Railroad and the Oregon Railway and Navigation Companies, was at first misunderstood, and led to some uneasiness and apprehension that the profits of the new corporation would be earned to the detriment of the two older ones. In a short time, however, the stockholders generally of both companies became satisfied that the union would not only work no harm to them, but would greatly promote their prosperity.

In purchasing a controlling interest in the Northern Pacific stocks, it was not the purpose of Mr. Villard to oust the then management of the Company. On the contrary he intended to offer it a friendly alliance, and to ask merely for a moderate representation in the Northern Pacific board. He personally made such a proposition to President Billings, and, in the course of several interviews with him, took pains to explain his full project for the control of all the transportation lines in Oregon and Washington Territory, not in the interest and for the benefit of the Oregon Railway and Navigation Company, but really of the Northern Pacific; but President Billings considered Mr. Villard's plans as too far-reaching or rather visionary, as he termed them; nor would he listen to the request for a small representation in the board. He and the other members of the board were impressed with the belief that it was Mr. Villard's intention to obtain control of the Northern Pacific in the sole interest of the Oregon Railway and Navigation Company—that is, to secure a permanent monopoly of Oregon and Washington Territory for that Company to the exclusion of contemplated Northern Pacific lines in that region. After his unsuccessful efforts for a recognition, Mr. Villard offered to purchase the holdings of Mr. Billings and the other directors. This offer was also declined.

Up to that time there remained undistributed in the hands of the treasurer of the Company as trustee about $18,000,000 out of the $49,000,000 of Northern Pacific Common stock created under the terms of reorganization. It had been the practice theretofore to distribute the issue of Common stock to those entitled thereto in proportion to the progress of construction of the road. President Billings, alarmed by the movements of Mr. Villard, called a meeting of the executive committee, at which it was resolved to divide at once the undistributed portion of the stock. As soon as Mr. Villard obtained knowledge of this purpose, he sued out a temporary injunction in order to prevent the distribution. Simultaneously suit was commenced by a preferred stockholder against the Company for an accounting for the earnings belonging to the preferred stock under the reorganization. The litigation attracted general attention at the time. After it had progressed some weeks, a compromise was made, under which Mr. Villard secured recognition in the board by the election of Messrs. Artemas H. Holmes and Thomas F. Oakes, in place of Joseph Dilworth and Johnston Livingston, and by the election of Thomas Oakes as first vice-president.

At the annual meeting of the Northern Pacific stockholders held September 15, 1881, a board of directors was chosen satisfactory both to the Oregon and Transcontinental Company and to the old management. It consisted of the following persons: Frederick Billings, Ashbel H. Barney, John W. Ellis, Rosewell G. Rolston, Robert Harris, Thomas F. Oakes, Artemas H. Holmes and Henry Villard, of New York; J. L. Stackpole, Elijah Smith and Benjamin P. Cheney, of Boston; John C. Bullitt, of Philadelphia, and Henry E. Johnston, of Baltimore. Henry Villard was then elected president, Thomas F. Oakes, vice-president; Anthony J. Thomas, second vice-president; Samuel Wilkeson, secretary, and Robert L. Belknap, treasurer. Mr. Wilkeson had been secretary since 1870, and Mr. Belknap treasurer since 1879. Mr. Thomas came into the official organization of the Company from the banking-house of Drexel, Morgan & Co. Further changes were made in the board at the election in 1882, to give additional representation to the syndicate of bankers who had taken the forty-million loan. J. Pierpont Morgan and August Belmont were elected in place of Artemas H. Holmes and Elijah Smith. Mr. Villard assumed the active direction of the Company's affairs immediately after his election to the presidency.

The wisdom of making adequate provision, through the instrumentality of the Oregon and Transcontinental Company, for whatever financial requirements might arise in completing and equipping the main line of the Northern Pacific was clearly demonstrated soon after the change in the control of the road. Under the stringent and embarrassing conditions of the contract with the bankers' syndicate, bonds could only be issued to the amount of $25,000 per mile as fast as sections of 25 miles were completed and examined by United States Commissioners, and accepted by the Government. There were unavoidable delays in the examination, and 275 miles of new road were built before the Government inspection took place. The completion of this mileage involved the necessity of procuring a very large sum of money in advance of the receipt of the proceeds of the bonds based upon it. In his annual report of 1882, President Villard said:

> "Even if more prompt inspection had been practicable—which it was not—the supply of money from the sale of bonds under the terms of the contract with the syndicate would not have avoided the necessity for large additional funds as working capital.

"The cause of this necessity is very clear. When the contract with the syndicate was entered into, it was practically impossible, owing to the incompleteness of the labors of the engineers, to make accurate calculations as to the period of time and the current supplies of money required for the vast work of building nearly one thousand miles of new and, in great part, very difficult road, mostly through unsettled regions destitute of construction facilities. Financial arrangements were made in the light of the best information then extant, which, however, proved deceptive. It soon became apparent that, in order to work without great waste of time and loss of money, it was indispensable, in the first place, to build simultaneously from both ends of the main line, and, secondly, to begin at once all the heavy work upon its entire length. This involved the shipment of millions of dollars' worth of track material, motive power and rolling stock to the Pacific coast many months before their actual use on the road; and on the line east of the Rocky Mountains very large expenditures of cash a long time before the works resulting from them could become parts of finished road.

"Thus there came calls upon the treasury far in excess of the proceeds of bonds received from the syndicate, and of the net earnings; and what added to the embarrassment of the situation was the impossibility of issuing bonds and delivering them to the syndicate except upon the mileage of completed road approved by the Government, owing to a provision of the mortgage under the requirements of the plan of reorganization. But, thanks to the assistance of the syndicate and the Oregon and Transcontinental Company, the treasury was always prepared to meet all demands without ever borrowing in the open market. And the management can now point to the fact that it has finished two hundred and seventy-five miles of road, graded one hundred and fifty miles additional, bought and paid for sufficient rails for the entire gap between the two ends of the main line, and made, besides, the current disbursements for motive power, rolling stock, the Bismarck bridge, the great Bozeman and Helena tunnels, and other heavier portions of the work, *without delivering a single bond to the syndicate from December last till September* 19."

The effective aid of the Oregon and Transcontinental Company continued to be required by the Northern Pacific thenceforth to the very end of the construction work on the main line. It is now well known to all connected with the management of the Northern Pacific, that but for this aid the Company could not have maintained a very high credit, and that the main line could not have been finished in 1883—in fact, that it could not have been completed at all without securing additional capital over and above the proceeds of the General First Mortgage Bonds.

The second object of the Oregon Transcontinental Company, as announced in its first annual report, was "to promote the Company's own interest, as the holder of such stocks (Northern Pacific and Oregon Railway and Navigation Company) by the creation of such auxiliary systems of railroad, steamship and steamboat lines as would tend to protect and increase the transportation business of these two corporations." In pursuance of this object, the branch lines of the Northern Pacific road in Minnesota and Dakota partially constructed at the time Mr. Villard assumed the presidency of the Company have been acquired by the Oregon and Transcontinental Company and pushed vigorously toward completion. A number of additional branches have been commenced; particulars regarding which are given in the following chapter.

In the spring of the present year, the Oregon and Transcontinental Company succeeded in obtaining a lease in perpetuity of the important roads of the Oregon and California Railroad Company, one extending from Portland, on the east bank of the Willamette River southward toward California, and the other running up the west bank for one hundred miles. In connection with the lease, the Oregon and Transcontinental Company also entered into a construction contract for the completion of the main line to a junction with the Central Pacific system at the California boundary. This junction will be made, it is expected, in the summer of 1884. The control of the Oregon and California system will be of the utmost benefit to the Northern Pacific, as it will be the means of connecting the latter with the whole of California.

Among the important and far-sighted measures of Mr.

Villard's administration have been the arrangements made in advance of the completion of the main line of the Northern Pacific for terminal facilities in the cities of Minneapolis, St. Paul, and Portland. These arrangements, without drawing on the financial resources of the railroad company at a time when all its means are needed to open and equip its transcontinental line, secure for its system the use and control of ample depot buildings for passenger and freight uses, freight and cattle yards, repair shops, round-houses, grain elevators, and, in the case of Portland, of a bridge across the broad, navigable stream of the Willamette River. The preparation of the financial plan for these two terminal systems and their successful presentation to investors was the work of Edward D. Adams, of the firm of Winslow, Lanier & Co. For the Portland terminus a Company was organized under the laws of Oregon, called the Northern Pacific Terminal Company of Oregon, with a capital stock of $3,000,000, owned entirely by the Northern Pacific Company, the Oregon Railway and Navigation Company, and the Oregon and California Company. The Terminal Company issues, as required, and only for the creation of its terminal property, $5,000,000 of first mortgage bonds, and the three transportation companies jointly and severally agree to pay as rental for the terminal facilities provided a sum sufficient to pay six per cent. interest on the bonds and to provide a sinking fund to extinguish the principal at maturity.

For the termini at Minneapolis and St. Paul, the work was undertaken under the ownership of the St. Paul and Northern Pacific Railway Company, the successor of the Western Railroad Company of Minnesota. Particulars concerning these corporations, and the terminal facilities in the two cities mentioned, are given in a succeeding chapter.

Late in the summer of 1883, as this volume goes to the press, the long lines of the Northern Pacific Railroad advancing, one from the East and the other from the West, up the two slopes of the continent, are about to meet near the summit ridge of the Rocky Mountains. By an interesting coincidence, their point of junction is not far from the spot where the advance parties of Gov. Stevens' exploring expedition met in 1853, one having come from St. Paul, Minnesota, and the other from Puget Sound and the Columbia River. Thus the first survey of the route of the Northern Pacific prefigured the history of the actual construction of the road. The water-shed of the continent is the meeting-place of the advancing ends of track, as it was of Grover and Saxton, the two young officers in command of the pioneer parties of the Stevens expedition. With the completion of the main line of the road, the great project of a commercial highway to the Pacific by the valley route of the Missouri and the Columbia rivers is at last realized. The trail of Lewis and Clarke is now spanned by the steel rail. The enterprise of which Barlow wrote in 1834, to which Whitney gave years of earnest but fruitless effort; which enlisted the engineering talent and energy of Johnson and Roberts, and was shown to be feasible and wise by Stevens' gallant explorations; the enterprise for which Perham obtained a charter from Congress conveying the most extensive and valuable land grant ever given to any corporation, and to the prosecution of which a long line of energetic, competent men—bankers, capitalists, railway builders, engineers, lawyers, journalists and pioneers have devoted years of the best labor of hand and brain, is at last achieved. Over the unbroken line of the Northern Pacific road, from St. Paul and Lake Superior to the broad estuary of Puget Sound, the locomotive now runs. At last the communities of the Pacific

Northwest are united to the East; at last the best of the transcontinental highways between the Atlantic and the Pacific is open to the flow of the currents of travel and commerce. Thirty years have elapsed since the Government surveys were made for this line of railroad; nearly forty since the project was first urged upon Congress; nearly fifty since it was first discussed in the press. Yet the road has been constructed in time to lead the van of advancing population through Dakota and Montana, and from the Pacific coast into the fertile plains and valleys of Washington and Idaho, and is completed as a highway from ocean to ocean in time best to fulfill the ardent hopes of its projectors and builders.

CHAPTER XXXII.

BIOGRAPHICAL SKETCHES.

W. Milnor Roberts' Career as an Engineer—His Early Connection with Railroads in the United States—Building a Railroad in Brazil—Chief Engineer of the Northern Pacific—His Death in Brazil—Samuel Wilkeson—His Career as a Journalist—His Connection with the Government War Loans—Elected Secretary of the Northern Pacific Company—The Senior Officer of the Company in Length of Service—Col. George Gray—Birth and Education in Ireland—Colonel of a Cavalry Regiment in the War for the Union—Becomes Attorney and General Counsel of the Northern Pacific Company—His Valuable Services—Thomas F. Oakes—A Practical Railroad Man from his Youth—His Connection with Railroads in Kansas—Manager of the Oregon Railway and Navigation Company—Vice-President of the Northern Pacific—Active Operations in Building the Road.

WILLIAM MILNOR ROBERTS was born in Philadelphia on February 12th, 1810, and was of Quaker descent. He was educated in the best private schools of that city, and showed an early aptitude for mathematics and drawing. When in his sixteenth year he selected the engineering profession, and obtained employment on the Union Canal, in the spring of 1825, as a chainman under the direction of the eminent canal engineer, Canvass White. At the age of 18 he was promoted to the charge of the most difficult section of the Lehigh Canal, extending from Mauch Chunk sixteen miles down the river. It was soon afterward his good fortune to be connected with the first railroad enterprises in the United States, his career as an engineer being thus contemporaneous with the beginnings and growth of the greatest agent of modern civilization. Railroad engineering in the United States began in a crude way in 1826 at the Quincy granite quarry in

Massachusetts, where a tramway was built for transporting stone to the water, a distance of three or four miles. The first railroad of any consequence, however, was the Mauch Chunk gravity road, nine miles in length; and Mr. Roberts was one of the passengers on the first trip made by a car over this line. In 1830 Mr. Roberts was appointed resident engineer in charge of the Union Railroad and canal feeder in Pennsylvania. In 1831–32–33 and '34 he was senior principal assistant engineer on the Alleghany Portage Railroad which transported the boats of the Pennsylvania Canal across the Alleghany Mountains, by the aid of inclined planes and stationary engines.

In 1835 he received his first appointment as chief engineer, being called to fill that position on the Harrisburg and Lancaster Railroad. In 1835–36 he planned and built the first combined railroad and common road bridge in the United States, which crosses the Susquehanna River at Harrisburg. During the same year he accepted the chief engineership of the Cumberland Valley Railroad, which he held until 1837. For twenty years, from 1837 to 1857, Mr. Roberts' career was one of almost unexampled variety, within the limits of his profession. His great energy and exceptional working power enabled him to undertake and complete an amount of labor of which few men are capable. He was successively chief engineer of the Monongahela River Improvements, Pennsylvania State Canal Construction works, the Erie Canal and the Ohio River improvements (1837–41). In 1841–42 he was a contractor on the Welland Canal enlargement. In 1843–44 he was chief engineer for the Erie Canal Company; and from 1845 to 1847 chief engineer and trustee-agent for the Sandy and Beaver Canal Company of Ohio. In 1848 the Legislature of Pennsylvania appointed him to make a survey on the Pennsylvania Canal, to avoid, if possible, the Schuylkill inclined plane. In 1849 he became chief engineer of the Belle Fontaine and Indiana Railroad, in Ohio, where he remained until 1851. From 1852 to 1854 he was chief engineer of the Alleghany Valley Railroad, consulting engineer for the Atlantic and Mississippi Railroad, contractor for the whole of the Iron Mountain Railroad, in Missouri, and chairman of the commission appointed for the Pennsylvania Legislature to examine and report upon routes for avoiding the inclined planes on the Alleghany Portage Railroad. From 1855 to 1857 he was a contractor for the entire line of the Keokuk, Des Moines and Mississippi Railroad, consulting engineer for the Pittsburg and Erie and the Terre Haute, Vandalia and St. Louis Railroads, and chief engineer of the Keokuk, Mount Pleasant and Muscatine Railroad. In December, 1857, Mr. Roberts went to Brazil to examine the route of the Dom Pedro II. Railway, with the purpose of bidding for its construction. The following year, as the head of a firm of American contractors, he concluded a contract with the Brazilian Minister at Washington, Senhor Carvalho de Borges, for the construction of the road. Returning shortly after to Brazil he took active charge of the work, and completed it in 1864. In that year and in 1865 he inspected various public works in Brazil, and in the La Plata Republics, returning home in the latter part of 1865. Soon after his arrival in the United States, Mr. Roberts took charge of the surveys for the Atlantic and Great Western Railroad, which he completed in 1867. In the same year he was appointed civil engineer in charge of the Ohio River improvement. In 1868 he was placed in charge of the construction of the great St. Louis bridge during the ill health of Captain J. M. Eads, who was obliged to cease work for a year.

The position of chief engineer of the Northern Pacific Railroad was tendered to Mr. Roberts in the fall of 1869. In accepting it he severed all other professional engagements. Going to the Pacific coast in the summer of that year, he made the reconnoissance of the route as far as Bozeman Pass, which we have described in a preceding chapter. The entire line of the Northern Pacific road from Lake Superior to Puget Sound was located by Mr. Roberts; and the route selected by him was followed in the subsequent construction, with the single exception of the portion of the main line between Gallatin and the mouth of the Little Blackfoot River. Mr. Roberts preferred the Deer Lodge Pass to the Mullan Pass for crossing the main divide of the Rocky Mountains, and intended that the road should run from Bozeman to the Jefferson River, and thence by way of the Jefferson Cañon and the Deer Lodge Pass to the town of Deer Lodge, and so down the Deer Lodge River to the junction of the Little Blackfoot. After his resignation the route was changed for the purpose of shortening the line, and of having the road run by way of the important city of Helena, the capital of Montana.

In 1874, Mr. Roberts was a member of the commission of civil engineers appointed by President Grant to inquire into the feasibility of constructing a canal to avoid the obstructions at the mouth of the Mississippi River; the Eads jetty system, subsequently adopted, being opposed at that time by many eminent engineers. In company with the other members of the commission, Mr. Roberts examined the Amsterdam Canal, the jetties at the mouth of the Danube, the Suez Canal, and the canal at the mouth of the Rhone, and subsequently the Delta of the Mississippi. The report of this commission was in favor of the jetty system, and led to the adoption of Captain Eads' proposition by Congress. In the succeeding fall Mr. Roberts became one of the advising board of seven distinguished engineers selected by Mr. Eads to aid in the plans and construction of the jetty work.

The Emperor of Brazil, Dom Pedro II., during his tour in the United States in 1876-7, visited the jetties at the mouth of the Mississippi, and in 1877 requested Captain Eads to recommend an engineer competent to improve the rivers and harbors of Brazil. Mr. Roberts was then in Washington Territory, locating the line of the Northern Pacific Railroad. He was recommended for the position, and accepted an offer of three years' employment for $75,000, beginning in January, 1879. This closed his connection with the Northern Pacific enterprise. He left New York on the 4th of January, 1879, and, arriving in Rio, was at once charged with the improvements of the port of Santos, which he completed in June, and in August began a survey of the upper San Francisco River, which occupied him for a period of six months. He subsequently served on a commission to report on the new water-works for Rio, and soon after examined all the northern ports of the empire. In 1881 he undertook an examination of the Rio Das Velhas, but was compelled to suspend his journey on the 7th of July, at a little settlement called Soledade, where he was seized with typhus fever, and died a week later in his seventy-second year. Mr. Roberts kept up his habit of hard and regular work to the last, and when over seventy years old was able to do severe intellectual and physical labor twelve hours a day in the depths of the primeval forests of Brazil. Samuel Wilkeson, speaking of him, said: "He was the best engineer this country has produced. And he was the soul of honor. There was not money enough in the United States Treasury to buy him away from his conscience, or make him surrender a deliberately formed professional conclusion. Duty seemed to wholly control the man. Yet right alongside of his intolerant conscience was more mirthfulness than I ever saw in man, more tenderness and sweetness than I have seen in most men. The good stories and the accumulated wit of the English-speaking world seemed to be in his head. I traveled with him thousands of miles, ate with him, slept with him, rode with him by rail, on the sea, on horseback. In eleven years' constant association I never saw a trace of selfishness in Milnor Roberts—not even that commonest expression of it which grumbles at discomforts. His patience and sweetness were inexhaustible, except when in his business he uncovered a thief or a liar. He was generous and self-forgetful beyond all my experience of men. Had it been possible for him to do so, he would have given himself away limb by limb. His energy as an engineer was exceptional. For rapidity of work he was unequalled. His power of labor made him a proverb. I have seen him before breakfast writing in a corner of a car on the Pacific railroad. At nine o'clock at night he was yet writing. I have seen him steadily through the day take notes in a stage coach, and on a steamer. He was the only man I ever saw write continuously in the saddle. I believe he wrote from Walla Walla to Missoula, on our reconnoissance of the Northern Pacific route. Oh, the great engineer and the dear man! It seems but yesterday that, as our horses walked through the Coriacan Defile, I coaxed him to put up his note-book and talk. And then I became acquainted with the unseen presence that watched and guided him while he was building the Dom Pedro railroad in Brazil—that remoulded his life in South America—that ever since came to him when in trouble or doubt, and gave him wisdom and strength—that finally made the whole life of this great constructor to be spiritual and childlike."

Samuel Wilkeson was fifty-two years old when he was chosen secretary of the Northern Pacific Railroad Company. He was born in Buffalo in 1817, graduated from Union College, was educated to the bar under Daniel

Cady, the traditional great lawyer of the State of New York, and in 1840 admitted to practice a profession from which he was always turning aside to write for a newspaper. He was born a journalist. His boyhood mates recall the weekly paper, written with a pen, which he published every Saturday in Amos Smith's grammar school in New Haven, Conn. It was but a question of time when he would belong to the press; and in 1856, in Buffalo, he started a radical, liberal, daily paper, the *Democracy*. From that paper, on the persuasion of Governor Seward and Thurlow Weed, he went to the Albany *Evening Journal*, buying Thurlow Weed's and George Dawson's interests, and editing it as principal owner. His health gave way in the second year of his work in Albany, and he was compelled to sell out and go into utter idleness. A year and a half of rest gave him the heart to accept an invitation from Horace Greeley to come on the editorial staff of the N. Y. *Tribune*. As an editorial writer and the day editor, he worked on this great paper till after the rebellion broke out, and after the "On to Richmond!" revolution had made its changes in the *Tribune's* editorial organization. This revolution threw out of office General Fitz Henry Warren in charge of the paper in Washington. Mr. Greeley appointed Mr. Wilkeson to the place. He had charge of the *Tribune* bureau in Washington till the close of the war, with an interval of one year's service on the N. Y. *Times*. This interval was induced by a natural rage at Mr. Greeley's bailing Jefferson Davis.

Two sons and six nephews in the army of the Potomac, all in the line, gave Mr. Wilkeson a constant personal attraction to the war. Choosing the times of great military movements and battles for absence from his trust in Washington, he often volunteered to do the work of chief war correspondent of the *Tribune* in Virginia, and wrote from the field letters that gave the writer fame, and have served for history.

While in the service of the *Tribune*, at the special request of Jay Cooke, the Government's fiscal agent, Mr. Greeley detached Wilkeson to aid the sale of the war loans of 5-20, 10-40 and 7-30 bonds. He did this by using nearly all the newspapers of the United States, and employing liberally the Associated Press and telegraph. It was the only time in the history of the country that so vast an agency to popularize and accomplish a public measure was committed to the hands of one man. Before this, and way back in 1854, Governor Seward, then in his political prime as the radical leader in the United States Senate, applied to Mr. Wilkeson to block out a speech for him on a subject he frankly confessed he knew nothing about, and concerning a country then unknown to the Government, and, among white men, known only to fur traders and trappers—a practicable route for a paying railroad across the continent to the Pacific Ocean. His study of this new theme and preparation of the speech so impressed Mr. Wilkeson's reason and imagination, that, when in December, 1868, the agents of the owners of the Northern Pacific Railroad charter, then applicants to Congress for a money subsidy, applied to him for help in a crisis of their affairs, he easily consented, and, without intending to do so, tied himself for life to their enterprise. Senate Bill No. 889, to subsidize the Northern Pacific and other transcontinental roads, had been considered in committee, and was to be favorably reported by a large majority of its members. The hostile influence of rival lines was sufficient to give rise to an adverse and most damaging dissent by the minority of the committee, designed to anticipate and nullify the recommendation of the majority. The service Mr. Wilkeson was begged to render was to write a report for the majority to accompany the bill they were to recommend, and, in it, to overthrow the statements and conclusions of the minority. The result was the lengthy Senate Report No. 219, 3d session, 40th Congress. It was signed by six members of the committee of nine, without the alteration of a word, and from that day to this has been an authority and manual in Washington.

Mr. Wilkeson's second service to the nearly moribund Northern Pacific enterprise was to induce Jay Cooke to listen to proposals from the owners of the charter to act as the fiscal agent of the Company to provide money to build its road and telegraph line, by selling the Company's bonds. Mr. Cooke's splendid success as the fiscal agent of the Government in the war, and his reputation in Europe as well as America, indicated him to Mr. Wilkeson as the fittest man in the nation to undertake this work. As the result of the negotiations which Mr. Wilkeson inaugurated, Mr. Cooke threw himself, soul, body and estate, into the enterprise. It is due to him to say that, almost from the beginning to the end, he stood alone in this vast undertaking amid his copartners in the four banking houses which he founded in Washington, Philadelphia, New York and London—alone and unsupported save by his brothers and his junior copartner, George Thomas. When Mr. Wilkeson authorized this statement, he said: "No history of Jay Cooke's connection with the Northern Pacific Railroad scheme will do him justice which does not recognize the double load put on him by the reluctance and opposition of the strongest and richest of his copartners."

A condition of Jay Cooke & Co.'s contract with the owners of the Northern Pacific charter was, that they should have the right to send their own engineer over the proposed route of the road, to report, first, if it was practicable, and second, if the country would support the road when built. When this preliminary reconnoissance was organized, Mr. Wilkeson joined it as "historian," at the request of Jay Cooke and of the owners of the enterprise, and for his necessary education in the topography, soils, climate and resources of the regions, the popularization of which with his pen, as he had popularized the 7-30 loan, was the work assigned to him in the corporation whose secretary it was already arranged that he should be. An account of this reconnoissance has been given in another chapter. Jay Cooke & Co. accepted the fiscal agency to provide the means to build the road, and the "historian of the expedition" quit journalism and joined himself for life to the project of a Pacific railroad on the northern route. He has uninterruptedly held the office of secretary of the Company since he was elected to it in March, 1870. The standard and permanent literature of the Northern Pacific Company up to 1882 was Samuel Wilkeson's work, as was nearly all the newspaper writing to protect and promote the enterprise, up to 1883.

George Gray, the general counsel of the Northern Pacific Company, was born in the County Tyrone, Ireland. He received a literary, mathematical, and classical education, which he finished at Portora College, near the historic town of Enniskillen, in the County of Fermanagh, and came to the United States when he attained the age of twenty-one years. He settled at Grand Rapids, Michigan, where he was admitted to the bar, and became a partner of the Hon. S. L. Withey, the present United States Judge of the Western District of Michigan. The firm of Withey & Gray, besides having a large general practice, were counsel for the Grand Rapids and Indiana Railroad Company until the commencement of the civil war put a stop to the construction of the road. Mr. Gray entered the military service of his adopted country as a volunteer, and commanded the Sixth Regiment of Michigan

Cavalry, which formed part of Custer's Brigade in Kilpatrick's Division of the Cavalry Corps of the Army of the Potomac. In consequence of disability caused by injuries received in the service while in command of the Brigade, in 1864, he was honorably discharged. As soon as his health permitted he returned to the practice of his profession, which at once became quite extensive, and he was retained in nearly every important case in the Federal and State courts in the western part of the State. He also resumed the position of counsel of the Grand Rapids and Indiana Railroad Company, and was instrumental in placing that corporation on so sound a legal basis, by saving its land grant and defeating the efforts of rival railroad companies to force it into bankruptcy and dissolution, that it was enabled readily to obtain the necessary means for the construction and completion of its road, only twenty miles of which had been completed at the outbreak of the war. The road was fully completed and equipped by the Continental Improvement Company, of which General George W. Cass was president, under a contract made with a receiver appointed by the United States Circuit Courts for the District of Indiana and Western District of Michigan. During all the transitions of that railroad company from a condition of utter insolvency to one of complete prosperity, Colonel Gray was its sole counsel in the State of Michigan.

When General Cass became president of the Northern Pacific Railroad Company, and Hon. Wm. A. Howard its land commissioner, they invited Colonel Gray to take the position of attorney of the Company. Mr. Howard had been also the land commissioner of the Grand Rapids and Indiana Railroad Company. Colonel Gray accepted the employment, and removed to St. Paul, Minnesota, where he remained until called to New York to take charge of the legal part of the proceedings for the reorganization of the Company. These proceedings, which had been begun before his arrival, were taken in charge by him and carried forward to such a speedy and satisfactory conclusion as to gain for him the hearty acknowledgments of the directors, who felt that he had saved the Company great expense, and prevented delays which might have hindered its reorganization for years. Colonel Gray was elected general counsel of the Northern Pacific Company in September, 1875, and has since had the management of its legal affairs, acting as attorney as well as counsel in all important matters coming before the courts, and also before the Government departments at Washington in which the interests of the Company are concerned, and preparing the Company's mortgages, leases and contracts. He has also frequently appeared before the Pacific Railroad Committees of the two houses of Congress as the representative of the Company, defending its chartered rights against unjust aggression. Soon after he became general counsel a serious question arose concerning the Indian reservations lying within the limits of the Company's land grant. The Sisseton and Wahpeton Sioux claimed all the rich lands in the Valley of the Red River of the North, now a vast and highly productive wheat field. Their title or claim to title was extinguished by treaty, but the Interior Department was disposed to hold that the lands extending from Fargo to Jamestown did not inure to the railroad Company, because the Indian possessory title had not been extinguished at the date the grant was made. Colonel Gray argued the question before the Secretary of the Interior and the Assistant Attorney-General, and succeeded in getting a decision which saved to the Company the best area of land within the entire grant. If the matter had been decided according to the preconceived opinion of the department, the Company would have been deprived not only of its Red River Valley lands, but of those lying within the bounds of the immense Indian reservations west of the Missouri, and this, too, in the face of the fact that Congress had bound the Government in the charter of the Northern Pacific to extinguish all Indian titles to land within the limits of the grant to the Company.

One more matter of great importance in which Colonel Gray rendered conspicuous service may properly be mentioned here. In May, 1879, the Company filed its map of the amended line of the Cascade Branch in Washington Territory. At the same time it offered for filing its mortgage on the Missouri Division. Shortly afterwards it received notice from the Interior Department that the question was under consideration whether, in consequence of the alleged expiration of the time prescribed by law for the completion of the road, the Company had any rights which the Department could recognize. At this time the Company had sold its bonds, and was proceeding to construct its road beyond the Missouri, yet the Government appeared determined, by refusing to file its mortgage, which rested in part on its land grant, to invalidate that instrument and the bonds issued under it. The emergency was of the most serious character. Colonel Gray hastened to Washington, and finding the Secretary of the Interior, Mr. Schurz and the Assistant Attorney-General for the Department of the Interior predisposed to decide the question against the Company, insisted upon a hearing before the Attorney-General, Mr. Devens. This was accorded, and the three officials heard Colonel Gray's argument, which was so conclusive that a decision was given not only that the time specified in the charter of the Company and the amendments thereto had not expired, but also that whether it had expired or not was a matter of no consequence, because the rights of the Company were not forfeited by such expiration, but continued as of the same force and validity as when the grant was made and accepted by the Company. Thus Colonel Gray succeeded in rescuing the Company from the grave disaster which threatened it at Washington, and which if not averted would have prevented the completion of its transcontinental line. The board of directors by special vote showed their appreciation of the great professional service rendered by him in this connection.

Thomas Fletcher Oakes, vice-president of the Northern Pacific since 1881, is a native of Boston, and is about forty years of age. He was educated at the public schools of that city, and under private tutors. In 1863 he accepted an offer from eastern capitalists who were the principal owners of the Kansas Pacific Railroad to become connected with that enterprise; then known as the Union Pacific Railroad—Eastern Division. He was at first associated with Samuel Hallett & Co., contractors for the construction of the road. He continued in the service of that Company until 1879, filling successively the positions of purchasing agent, general freight agent, general superintendent and vice-president. He was general superintendent at the time he severed his connection with the Kansas Pacific, and during the receivership of Mr. Villard, leaving the Company's service at its termination. From the Kansas Pacific Mr. Oakes went into the service of the Kansas City, Fort Scott and Gulf, and Kansas City, Lawrence and Southern Kansas Railroad Companies, in the interest of the Boston owners, among whom were the late Nathaniel Thayer, H. H. Hunnewell, William F. Weld, since deceased, and others. This system of lines, with its branches, comprised about 600 miles of railroad. He remained with these companies about one year, leaving their service in May, 1880, when he went to Oregon on Mr. Villard's invitation, and assumed the managership of the Oregon Railway and Navigation Company, which had shortly before been organized. He remained with this Company until the control of the Northern Pacific passed into the hands of Mr. Villard and his associates, when he came to New York and was elected vice-president in June, 1881. He has since continued in that capacity. Mr. Oakes may be regarded as Mr. Villard's executive officer, more particularly in charge of the operating and constructing departments, his long experience in both especially fitting him for such work.

At the date Mr. Oakes assumed the duties of vice-president, the end of track on the Eastern Division was at Dickinson, Dakota, and on the Western Division at Sprague, Washington Territory, the gap remaining to be built being about 1,000 miles. During a period of but little over two years this immense length of track, embracing the most difficult portions of the work on the entire line, including the mountain divisions and the two great tunnels, has been constructed under his direction. He has also made a complete reorganization of the system of operation which greatly increased its effectiveness. One of the first steps taken by Mr. Oakes on assuming his duties was a tour of inspection along the located line between the two ends of the track, which was undertaken and accomplished mainly in the saddle in August and September, 1881. Some forty days were required for this inspection, and the information gathered proved of great value to the Company in its financial and construction operations. Mr. Oakes likewise has charge of the construction of the branch lines of the Oregon and Transcontinental Company, which are built under the authority and direction of the Northern Pacific Railroad Company. The aggregate length of road constructed under Mr. Oakes' direction, including the lines of the Northern

Pacific, Oregon Railway and Navigation and Oregon and Transcontinental Companies, from the time he assumed the duties of the vice-presidency in June, 1881, to the completion of the main line of the Northern Pacific, a period of two years and two months, is a little over 2,000 miles—a record rarely equaled.

CHAPTER XXXIII.

RELATIONS OF THE NORTHERN PACIFIC WITH OTHER COMPANIES.

The Lake Superior and Mississippi Railroad—Purchase of a Half Interest in the Line from Duluth to Thomson Junction—Lease of the Entire Road, with its Leased Lines—Lease Surrendered—The St. Paul and Pacific Company and the St. Paul and Pacific First Division—A Controlling Stock Interest Acquired by the Northern Pacific—Retransfer of the First Division—Foreclosure and Sale of the St. Paul and Pacific—The St. Paul, Minneapolis and Manitoba Company Formed—The Western Railroad Company of Minnesota—The Northern Pacific, Fergus Falls and Black Hills Railroad Company—Its Stock Purchased by the Northern Pacific Company—The Casselton Branch—The Little Falls and Dakota Railroad Company—Other Branches—Arrangement with the Oregon and Transcontinental Company for the Building of Branch Lines.

THROUGH leases, joint ownership and ownership of controlling stock interests, the Northern Pacific Company has sustained relations to other railway corporations some account of which should properly find place in this history. It has been thought best to make these relations the subject of a separate chapter, after referring to them only in an incidental way in the preceding pages of the work.

The Lake Superior and Mississippi Railroad was constructed from Duluth to St. Paul under authority of an act of the Legislature of Minnesota. From Duluth the road runs along the north bank of the St. Louis River, a distance of about twenty-three miles, to Thomson in Carleton County. This part of the line was constructed through a rough and difficult country, broken by numerous and deep ravines, requiring the erection of lofty and expensive trestles. The construction of the Northern Pacific

Railroad was begun in 1870, at a point on the Lake Superior and Mississippi Railroad about one mile south of Thomson, and was thence extended westwardly; this point is known as "Thomson Junction," or "Northern Pacific Junction." To obtain immediate access to the Lake, the Northern Pacific Railroad Company purchased an undivided half of the Lake Superior and Mississippi Railroad from the Junction to its terminus in Duluth with certain other property rights and easements in Duluth, and on the Bay of Superior, for $500,000, payable in gold coin when the first mortgage bonds of that Company would become due, with interest in the meantime at the rate of seven per cent. per annum, payable semi-annually in gold coin. The deed of the property was dated January 1, 1871, and was conditional on the punctual payment of the purchase money and interest.

Subsequently the Northern Pacific took a lease of the entire line of the Lake Superior and Mississippi Railroad, and an assignment of several traffic contracts and leases held by that Company, among which were a lease of the Stillwater and St. Paul Railroad, extending from Stillwater, on the St. Croix River, to White Bear Lake, a station on the Lake Superior and Mississippi Railroad; a lease of the Minneapolis and Duluth Railroad, extending from Minneapolis to White Bear Lake; and a lease of the Minneapolis and St. Louis Railway, extending from Minneapolis to a point on the St. Paul and Sioux City Railroad, then only partly constructed. The lease of the Lake Superior and Mississippi Railroad was dated May 1, 1872, and was for the term of nine hundred and ninety-nine years, which was also the term of the assigned leases. The rental of the leased railroads was to be thirty per cent. of their gross earnings; and it was provided and agreed that in case that percentage of the gross earnings should in any six months be insufficient to pay the interest and sinking fund charges on the leased roads, the lessee should take up and hold an amount of coupons for interest on the first mortgage bonds of the Lake Superior and Mississippi Railroad Company equal to the deficiency.

By agreement of the parties the Northern Pacific Company, in 1874, surrendered all these leases. Coupons of the Lake Superior and Mississippi Railroad Company to the amount of $183,700, taken up under the provision of the lease, remained on its hands. In 1877, the first mortgage of the Lake Superior and Mississippi Railroad Company was foreclosed, and by the decree of foreclosure the coupons so held by the Northern Pacific Company were adjudged to be a valid lien on the mortgaged property; and it was also decreed, upon stipulation of all the parties to the suit, that the Northern Pacific might pay the entire purchase price of the undivided half of the railroad from the Junction to Duluth, in any amounts, from time to time, prior to January 1st, 1897, in the securities of the new organizations for which the bonds and coupons of the Lake Superior and Mississippi Railroad Company might be exchanged. The coupons held by the Northern Pacific Company were exchanged for preferred stock of the new organization, and the latter was at once paid over as part of the purchase money. The remainder was very soon afterward paid in like securities, and thereupon the St. Paul and Duluth Railroad Company (the successor of the Lake Superior and Mississippi) executed an absolute conveyance to the Northern Pacific of the undivided half of the railroad from the Junction to Duluth, and of the other property mentioned, free from all condition and clear of all encumbrance. This part of the St. Paul and Duluth Railroad is maintained at the joint expense of both companies on a wheelage basis.

The St. Paul and Pacific Railroad Company was incorporated by a special act of the Legislature of Minnesota, and was authorized to construct, maintain and operate a railroad from Stillwater, by way of St. Paul, St. Anthony and Minneapolis, to Breckenridge, a point on the western boundary of the State, with a branch from St. Anthony, (now East Minneapolis), via Anoka, St. Cloud and Crow Wing, to St. Vincent, on the Red River of the North, near the International Boundary. Under authority of an act of the State Legislature, approved February 6, 1864, the corporation made a division of its organization, whereby the lines from St. Paul to Watab, in the County of Benton, a distance of about eighty miles, and from St. Anthony to Breckenridge, about two hundred and ten miles, became what was afterwards known as the "First Division of the St. Paul and Pacific Railroad," the parent Company retaining the original name and the remaining lines and parts of lines it was authorized by law to construct.

An agreement was made by and between the St. Paul and Pacific Company and E. B. Litchfield, of Brooklyn, to whom it had issued eight thousand five hundred shares of Preferred and Special stock, pertaining to the lines from St. Paul to Watab, and from St. Anthony to Breckenridge, in and by which the Company sold and transferred to Litchfield the lines last above mentioned, and all things, including the land grant, appertaining thereto, with the right to increase the capital stock to the full cost of the railroad; and in consideration thereof he undertook and agreed to build and complete the lines of road so conveyed, and to choose a board of directors therefor, under the name of "The First Division of the St. Paul and Pacific Railroad Company." Early in the year 1870, the Northern Pacific Railroad Company purchased from E. Darwin Litchfield, of London, to whom E. B. Litchfield had assigned and transferred all his rights and interests therein, the capital stock of the First Division Company, and its railroads, with all the franchises, property, including the land grant, rolling stock and effects of every kind belonging thereto, for $500,000 in money, and $1,500,000 in second mortgage bonds of the St. Paul and Pacific Company, the stock and franchises of which the Northern Pacific Company had previously acquired. The First Division was at that time completed from St. Paul to Sauk Rapids, seventy-five miles, and from St. Anthony to Chippewa, one hundred and twenty miles, and the grading was done from Chippewa to Breckenridge, ninety miles.

The St. Paul and Pacific Railroad Company made various changes of its lines, so that eventually they consisted of a line from Watab to Brainerd, on the line of the Northern and Pacific Railroad, and called the "Brainerd Branch," and from St. Cloud to St. Vincent, crossing the line of the Northern Pacific at Glyndon, and known as the "St. Vincent Extension." No part of these lines had been constructed in 1870. In April of that year the Northern Pacific Railroad Company purchased the entire capital stock of the last named Company, except a few outstanding shares, for $75,000 in the first mortgage bonds of the Northern Pacific Company, and also, as part of the consideration, assumed to pay the debts of that Company to the amount of $50,000.

The First Division Company and the St. Paul and Pacific Company, each to provide for the construction and completion of their respective lines of railroad, issued bonds secured by mortgages upon their respective properties and franchises, and let the work of construction to contractors. The First Division was completed to Breckenridge. Of the St. Paul and Pacific lines the construction of the St. Vincent extension was completed from St. Cloud to Sauk Centre, the grade was done to

Alexandria, together with a large part of the grade north of Glyndon. The grade between Watab and Brainerd, the Brainerd Branch, was partly done. All work on the St. Paul and Pacific lines was suspended in 1873, in consequence of the financial agents of the Company in Amsterdam reporting their inability to negotiate any more of the bonds. In May, 1874, the Northern Pacific Railroad Company being unable to comply with the terms of its purchase of the First Division lines, retransferred to Mr. Litchfield the capital stock, and he thereupon assumed the control and management of the railroads and property of the First Division Company. By reason of default in the payment of interest on the bonds of the St. Paul and Pacific Railway Company, the mortgage on its property, rights and franchises was foreclosed, and on decree and sale the capital stock held by the Northern Pacific was extinguished. The properties and franchises of both the First Division Company and the St. Paul and Pacific Company were acquired by the bondholders, who thereupon organized as a corporation by the name of the Saint Paul, Minneapolis and Manitoba Railway Company. A traffic contract was made and entered into by the Northern Pacific and the Manitoba Companies, dated the 1st day of August, 1879, by which, among other things, the Northern Pacific obtained the right to the perpetual joint use of the other Company's road from Sauk Rapids, where it connects with the Western Railroad of Minnesota, to Minneapolis and St. Paul, and of terminal facilities at St. Paul.

The Western Railroad Company of Minnesota is a corporation created in 1874, and existing under the general laws of that State. Previously to 1877 it had constructed no railroad. By an act of the State Legislature approved March 1, 1877, all the rights, franchises, privileges and property, including the land grant, of the St. Paul and Pacific Railroad Company appertaining to its line from Watab to Brainerd, known as the "Brainerd Branch," were forfeited to the State, and were offered to a corporation to be formed by, or in the interest of, a majority of the bondholders. The conditions were that such offer should be accepted and security given by the 1st day of May following; failing in which, any corporation having authority to build a railroad in the State might succeed to and acquire the right to construct and complete the Brainerd Branch, on filing notice of its intention to do so, and depositing $15,000 with the State treasurer as a guaranty for the performance of its undertaking. On compliance with the provisions of the act, and upon the completion of the road, or any part thereof, not less than ten continuous miles in length, such Company should immediately become vested with all the rights, privileges, franchises, lands, property and immunities appertaining to the road so completed. The act required the work to be commenced within thirty days after the filing of the notice,and to be completed within one year thereafter. The bondholders having failed to accept the offer, the Western Railroad Company of Minnesota gave notice of its desire to build the road, deposited the security, began the work, and by the 1st day of November, 1877, completed the road from Brainerd to Watab, and thence extended it to Sauk Rapids, the terminus of the branch of the First Division of the St. Paul and Pacific Railroad, thus making a through railroad connection from St. Paul and Minneapolis to the Northern Pacific Railroad at Brainerd. In May, 1878, the Northern Pacific Railroad Company took a lease of the Western Railroad for 99 years, at an annual rental, for the first five years, of thirty-five per cent., and for the remainder of the term of forty per cent., of the gross earnings.

This lease, together with the right obtained, as before mentioned, to use the track of the St. Paul, Minneapolis and Manitoba Railway Company from Sauk Rapids, secured to the Northern Pacific a direct inlet from its main line to the cities of Minneapolis and St. Paul. With the extension of the main line of the Northern Pacific across the continent, and the steady growth of its traffic, it soon became apparent, however, that it would be more desirable for it to control a line of its own into those important commercial and industrial centres. In connection with the agreement for an exchange of lines hereafter referred to, the Northern Pacific obtained, therefore, a modification of the contract giving it the right to use the St. Paul, Minneapolis and Manitoba Company's track from Sauk Rapids, by which modification in lieu of the right of track it acquired a right of way 43 feet in width from Sauk Rapids to Minneapolis, on and over which to extend the Western Minnesota line into Minneapolis. With a view to the construction of this extension, and to the creation of commensurate terminal facilities for its transcontinental traffic both in Minneapolis and St. Paul, the Northern Pacific came to an understanding with the Oregon and Transcontinental Company under which the latter should acquire the entire stock of the Western Minnesota Company not owned by the Northern Pacific, and that thereupon the Western Minnesota should be reorganized in order to enlarge its corporate powers in accordance with the enlarged sphere of operation proposed for it. The Oregon and Transcontinental Company, having purchased all the outstanding stock, the reorganization was carried out by the filing of new articles of incorporation, under which the name of the Company was changed to the "St. Paul and Northern Pacific Railway Company," and in addition to the powers the corporation originally enjoyed it was authorized to construct its railroad to the cities of Minneapolis and St. Paul, as well as several branch lines, and to build, own and operate elevators, warehouses and other facilities, terminal and otherwise, for the operation of its roads.

The reorganized Company entered into a construction contract with the Oregon and Transcontinental Company, under which the latter Company undertook to extend the railroad about ninety-two miles, from Sauk Rapids to Minneapolis, including a bridge across the Mississippi River, and to build a double track from St. Paul to the extensive properties of the Company, about midway between St. Paul and Minneapolis. It further agreed to provide terminal improvements to accommodate the business of the more than 3,000 miles of the transcontinental system of the Northern Pacific Railroad Company, upon the twenty acres at Minneapolis and the three hundred and eighty acres at St. Paul owned by the St. Paul and Northern Pacific Railway Company, including union passenger and freight stations, round houses, machine and car shops, stock yards, general freight yards, elevators and other required facilities. For these several purposes the St. Paul and Northern Pacific Railway Company created a mortgage under which the immediate issue of $7,000,000 of bonds was authorized out, of which sufficient bonds are to be reserved for the retirement of the outstanding issues of bonds made by the Western Railroad Company of Minnesota, now amounting to $673,000.

The St. Paul and Northern Pacific Railway Company further entered into a contract and lease with the Northern Pacific Railroad Company under which the latter Company takes the property for a period of 999 years from February 1, 1883, at an annual rental of forty per cent. of the gross earnings, but which is not to be less in any year than a sum sufficient to pay the annual interest on the then outstanding bonds of the St. Paul and Northern Pacific Railway Company.

The Northern Pacific, Fergus and Black Hills Railroad Company is a corporation existing under the laws of Minnesota. The name of the corporation at first was the Minnesota Northern Railroad Company, and the purpose of its projectors was to construct a narrow gauge road from the village of Fergus Falls northeasterly to a junction with the Northern Pacific Railroad, and from the same place westerly to a junction with the First Division of the St. Paul and Pacific Railroad at Breckenridge. In the original articles of incorporation the business of the Company was stated to be the construction and operation of a railroad "from Fergus Falls in Otter Tail County to a connection with the Northern Pacific Railroad, and also to a connection with the St. Paul and Pacific Railroad by such route as may be determined by said Minnesota Northern Railroad Company." The articles were amended, in accordance with the law of the State, so as to enlarge the powers of the corporation, to state its purpose with greater certainty, and to change the corporate name. It became, as the Northern Pacific, Fergus and Black Hills Railroad Company, empowered to construct, complete, own and operate a standard gauge railroad from a point on the Northern Pacific Railroad one mile west of Wadena to Fergus Falls, thence to the western boundary of the State, and thence to Deadwood in Dakota Territory, known as the main line, with branches from the main line northwardly up the Pelican Valley, and southwardly to Benson, in the county of Swift, and from another point east of Fergus Falls on the main line northerly *via* Otter Tail Lake, Perham, and Red Lake Falls to the International Boundary. The Northern Pacific Railroad Company acquired all the capital stock of the Company. Work was commenced at Wadena in the spring of 1881, and the track reached Breckenridge, on the Red River, in the autumn of 1882. A branch from Fergus Falls to Pelican Rapids was simultaneously built. The Company thereby earned $200,000 of bonds of Otter Tail County, and a grant of swamp lands said to be of the extent of nearly 100,000 acres. Under authority of a law of Dakota Territory the construction of the road was extended into that Territory from Wahpeton, the county seat of Richland County, on the left bank of the Red River opposite Breckenridge, for a distance of about forty miles on a graded road-bed made by the St. Paul, Minneapolis and Manitoba Railway Company, and purchased from that Company in pursuance of a general adjustment of the differences between that Company and the Northern Pacific, under which there was an exchange of lines, resulting in making the system of the Northern Pacific a strictly east and west one, and that of the other Company a north and south one. This purchase was accompanied by a sale of the Pelican Rapids Branch to the Manitoba Company. The Northern Pacific, Fergus, and Black Hills Railroad will be a very important feeder of the Northern Pacific.

The exchange of lines between the two companies included also the transfer of the ownership to the Manitoba Company of the so-called, Casselton Branch, which had been constructed by the Casselton Branch Railroad Company, and incorporated under the laws of Dakota, from Casselton on the main line of the Northern Pacific, northward a distance of 43 miles. The line not being mortgaged, and all the stock of the Company being owned by the Northern Pacific, the transfer was an easy matter.

The Little Falls and Dakota Railroad Company is a corporation organized under the general laws of the State of Minnesota to construct a line from Little Falls, a station on the Western Minnesota line, to the western boundary of the State. The building of the line entitled the Company to a grant of 334,080 acres of overflown lands from the State, and to $164,800 county bonds. The Oregon and Transcontinental Company acquired the franchises of the Company, and the line was built from Little Falls, *via* Sauk Center, to Morris, a distance of 88 miles, during the latter half of 1882. At Morris it intersects the Breckenridge main line of the St. Paul, Minneapolis and Manitoba Company, and connects with a line already constructed thence by the latter Company to Brown's Valley. An agreement was effected for the joint use of the Brown's Valley line by both companies.

The stock of the Little Falls and Dakota Railroad, the Northern Pacific, Fergus, and Black Hills Railroad, and other branches of the Northern Pacific system now in progress of construction, is held by the Oregon and Transcontinental Company under tripartite contracts. The terms of these contracts are that the Oregon and Transcontinental Company shall construct the branches and take their bonds at the rate of $20,000 per mile; that the Northern Pacific shall operate the branch lines and pay after the expiration of two years from the commencement of such operation six per cent. annual interest on the bonds, and one per cent. per annum as a sinking fund; that all the stock shall be deposited with a trust company, and that when the bonds are all retired the stock shall become the property of the Northern Pacific Company; in the meantime this Company has the right to dividends and of voting on the stock.

The branches constructed, or in process of construction, under this arrangement, besides the two above named, are as follows: the extension of the Western Railroad from Sauk Rapids to St. Paul; the Fargo and Southwestern

Railroad; the Sanborn, Cooperstown, and Turtle Mountain Railroad; the Jamestown and Northern Railroad; and the National Park Branch, built under the charter of the Rocky Mountain Railroad Company of Montana. In the case of the Columbia and Palouse Railroad in Washington Territory, the amount of bonds, owing to the expense of construction, is $30,000 per mile, and the Oregon Railway and Navigation Company joins the Northern Pacific in the contract with the Oregon and Transcontinental Company, and assumes one-half of the obligation to pay the interest on the bonds, and sinking fund charges.

With the high credit commanded by the securities of the Oregon and Transcontinental Company in the financial market, it will be easy to provide for whatever requirements the growth of the regions tributary to the Northern Pacific may create in the way of extensions of the branches already commenced and in the construction of new ones. In speaking on this subject President Villard, in his report to the stockholders of the Northern Pacific Railroad Company for the year 1881–82, said:

"It is well known that the growth of all the great Western railroad corporations is in the largest measure due to the gradual construction of systems of tributary lines. But all these companies succeeded in providing themselves with such local systems only through the efforts, sacrifices and embarrassments of years. The Northern Pacific is, and will probably remain, the only Company so fortunate as to command that source of prosperity to the fullest extent, and practically without financial burdens, in the early stages of its career.

PART II.

THE NORTHERN PACIFIC COUNTRY.

CHAPTER XXXIV.

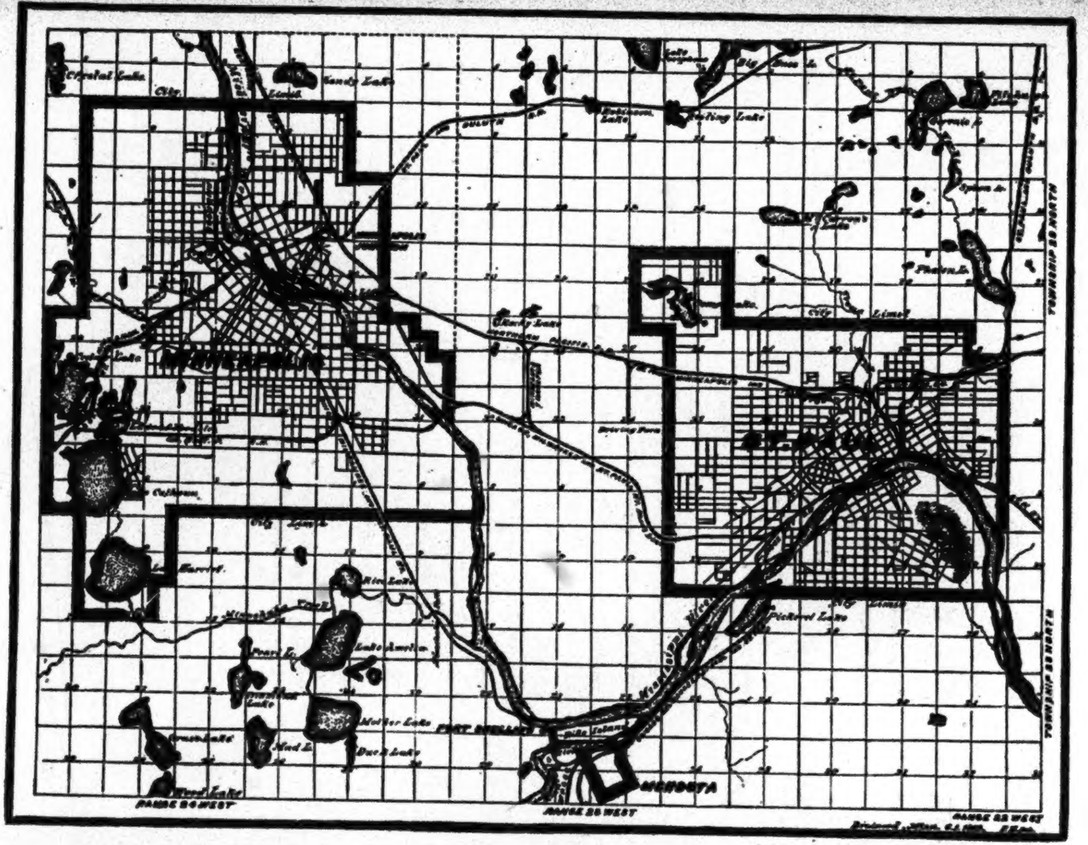
EASTERN TERMINAL CITIES AND LAKE PORTS.

A Defect in the Northern Pacific Charter—Lake Superior not the Proper Eastern Terminus—A Description of the Twin Cities of Minnesota—St. Paul the Older Place—Remarkable Recent Growth of Minneapolis—Business of the Two Cities—Picturesque Appearance of St. Paul—Minneapolis and the Falls of St. Anthony—Northern Pacific Offices and Terminal Facilities—The Bay of Superior—Ambition of Both Wisconsin and Minnesota to Possess a Commercial City at the Head of Lake Superior—Superior and Duluth—Why Duluth was Made the First Lake Terminus of the Northern Pacific—The Strife About the Duluth Canal and Dike—Growth of Duluth—Prospects of Superior—Ashland a Third Northern Pacific Port.

THE charter of the Northern Pacific Company was defective in one important respect; it provided that the road should begin at the head of Lake Superior, thus fixing its eastern terminus in a wilderness at the end of a great fresh-water sea, closed to navigation by ice for five months of the year, and without railway communications. The lake terminus was valuable for the traffic in coal and other heavy materials, and for grain shipments eastward to the seaboard; but if no other eastern outlet had been secured, the enterprise would have been foredoomed to failure. St. Paul was the natural starting-point for the line, being the furthest place from Chicago reached by the railway system of the Northwest at the time the charter was granted, and a town of sufficient importance to afford facilities for construction and a base of supplies. We have seen in previous chapters how the Northern Pacific Directors managed to remedy the mistake of Congress by purchasing the stock of the St. Paul and Pacific Company, and how, when they lost their hold on that corporation in a time of financial distress, and it was reorganized as a rival interest, they secured a line from their main road at Brainerd to Sauk Rapids, about half-way to St. Paul, and made a contract for a joint use of track for the remainder of the distance. The increasing business of the Northern Pacific soon rendered this arrangement inadequate, and an independent line to Minneapolis is now being built for the Company's use.

These two cities, of equal size and importance, situated at the head of navigation on the Mississippi River, so near to each other that their suburbs almost touch, and destined to grow together and form a metropolis rivaling Chicago, are the eastern end of the Northern Pacific system. They are of nearly equal size, the people of each claiming that it is a little larger than the other. Probably a fair estimate of their population in the summer of 1883 would assign to each 75,000 inhabitants. Their growth on parallel lines of development, with business centres less than ten miles apart, affords an interesting and unique phenomenon. Neither is in any sense a suburb or dependency of the other. Each is a true city in all that pertains to urban life, having its wholesale trade, its crowded business streets, its banks, railroads, theatres, street-car system, and daily newspapers; yet, in going from one to the other on either of the three lines of railroads connecting them, the traveler is not out of sight of the suburbs of the place he is leaving before the spires of its twin-city rise before him.

St. Paul is the older place, having been a frontier trading post in the time when the whole area of the present State of Minnesota was an Indian hunting ground. As a Territorial capital, and later the capital of the State, it


Crystal Lake
City
Sandy Lake
Duluth R.R.
Robinson Lake
Big Bass L.
Gervais L.
Spoon L.
Phalen L.
City Limits
Northern Pacific R.R.
Calhoun
Harriet
City Limits
Minnehaha Creek
Rice Lake
Lake Amelia
Pearl L.
Mother Lake
Mud L.
Duck Lake
Grass Lake
Wood Lake
Fort Snelling
Pike Island
Mendota
Mississippi River
Pickerel Lake
City Limits
Range 24 West
Range 23 West
Range 22 West
Township 29 North
Township 28 North

early attained importance, and as the most convenient landing-place for supplies at the head of river navigation, commerce occupied it as a distributing point. The growth of Minneapolis dates from the establishment of manufacturing industries at the Falls of St. Anthony. Formerly there were two villages, one on the east bank of the river, bearing the name of the falls; the other on the west bank, called Minneapolis in 1851. The first saw-mill was put in operation in 1848, by the aid of a temporary dam built across the east channel of the river. The place was a natural seat of lumber manufacture, the Mississippi and its tributaries carrying the logs down from the pineries of Northern Minnesota, and the cataract affording ample power for mills. The remarkable growth of the place dates, however, from a very recent period. As late as 1860 there were only 5,821 inhabitants in the two villages. It was the cultivation of wheat in the North-west, and the building of flouring-mills at the Falls of St. Anthony, which gave Minneapolis the impetus that brought it out of the country village state. In 1860 the first mill to grind wheat was set in motion, and two more were built next year. The outbreak of the rebellion of 1861 checked the growth of both Minneapolis and St. Paul, but they were more seriously affected by the Sioux Indian massacre of 1862. In August of that year three thousand savages fell upon the unsuspecting settlers along a frontier line of two hundred miles, advanced less than a hundred west of the capital of the State. More than 2,000 men, women and children perished in a single week by the bullets and knives of the brutal Sioux, and blazing villages and farm houses spread a lurid glare along the western sky. Many thousands of terror-stricken fugitives abandoned their homes, and flocked for protection to St. Paul and Minneapolis. The Indians were soon held in check, and in a few weeks were totally defeated in a hard fight, and driven out of the State, but the news of the massacre stopped emigration to Minnesota for a time, and retarded the settlement of her fertile prairies. Prosperity was restored in 1864 and 1865, and since then the growth of the twin cities has been rapid. St. Paul was far in the lead until the great expansion of the flouring and lumber industries at the falls brought Minneapolis up abreast with her neighbor. During the year 1882 Minneapolis manufactured 312,239,000 feet of lumber, and ground 16,900,000 bushels of wheat into flour. Its flouring mills are imposing structures of stone, and many of them are equaled for capacity of production nowhere in the world save by a single mill at BudaPesth, in Hungary.

St. Paul's leading business is the wholesale trade in groceries and dry goods. Many of the commercial houses occupy buildings of great size, and carry stocks scarcely exceeded by those of the best known firms of Chicago and New York. Their stately edifices of trade lining the streets in the business quarter, give to the town an air of dignity and solid prosperity. With one exception the six railway lines which make St. Paul a terminus run also to Minneapolis, and all use a freight transfer station midway between the two cities. St. Paul, however, is regarded as the focus of railway activity, as Minneapolis is of manufacturing. It also does a large transportation trade by river, in spite of the great diversion of traffic from water to rail. Two lines of steamers despatch each a boat daily to St. Louis.

In their physical aspects the two cities differ widely. St. Paul is built on three plateaux, rising above the river like irregular terraces, and broken by the depressions of bold ravines. The streets are narrow, and some of them climb steep hills. A long truss bridge crosses to an island, and thence to the opposite shore of the river, affording communication with a suburb on the further bank. The State

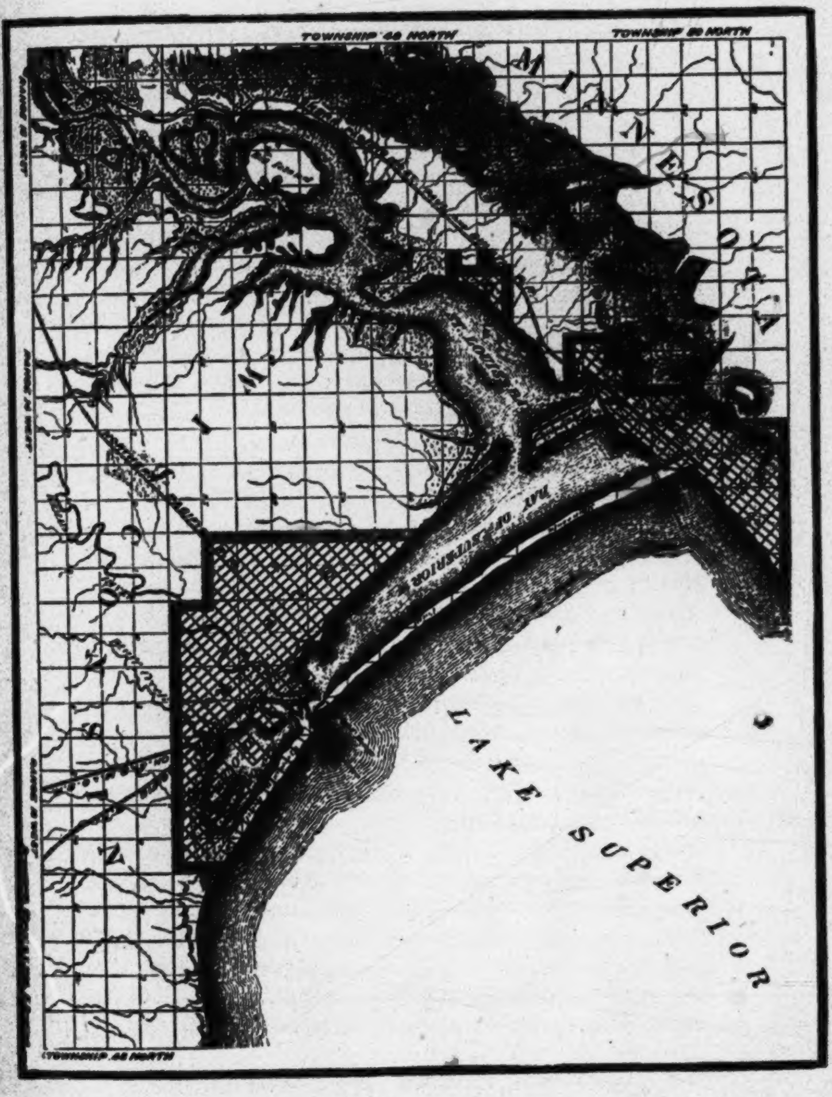
Capitol is a new building, not fortunate in its exterior architecture, but handsomely finished within with the nature-polished woods of the State. It is well lighted, well ventilated, and well arranged for its purposes. The best residence street, Summit Avenue, skirting a bluff for a mile, gives striking views over the river and the town, and affords abundant evidences of wealth and taste in its dwellings and grounds.

Minneapolis stands on level ground on both sides of the river, but mainly on the western bank, the two parts of the city being joined by a suspension bridge. The Falls of St. Anthony, after threatening for five years to break away and change to a lively rapid, were fettered and protected by aprons of stout timber, in 1872, and made to look like a prosaic milldam on a large scale. On both sides of the river below them, and on the shores of an island above, are the rows of flour-mills and saw-mills which form the chief source of the city's prosperity. On the wide and level prairie over which Minneapolis has spread itself out, there was opportunity for a systematic arrangement of the streets, which are broad avenues, with wide sidewalks, and in many cases quadruple rows of trees, forming cool archways of shade in the brief, hot summer of this northern latitude. The tourist who drives through these fine arcades of living verdure, bordered by handsome houses and pretty lawns, is disposed to concede the claim of the residents that theirs is the most beautiful young city in America.

At St. Paul and Minneapolis the Northern Pacific Road has the advantage of three competing connections with Chicago, an advantage which the Union Pacific obtained at Council Bluffs when its line was opened. Making timely provision for the future, the Company has purchased extensive grounds for a Union depot and car shops in the present northern outskirts of the city, and other grounds about midway between the two cities for elevators, stockyards, and general freight purposes. It has also erected in St. Paul a massive and handsome fire-proof building for its general offices, which for solidity of construction and style of finish is hardly equaled by any business structure in the West. With the exception of the State Capitol, it is the most substantial and conspicuous building in St. Paul.

The growth of St. Paul and Minneapolis in the immediate future promises to exceed that of the past. A thousand miles' breadth of country, whose settlement has barely begun, is tributary to them. They stand in the gate-way of the New Northwest. Their commerce embraces in its far-reaching scope the pineries of Northern Minnesota, the highly productive wheat fields of the valleys of the Red River and the James, the Missouri Slope, just beginning to attract immigration, and the vast expanse of Montana as far as the Rocky Mountains. Every farm that is opened, and every village that springs up in Dakota or Montana, adds to their wealth. They feel in all the channels of their business activity the stimulus of the immense fertile region lying beyond them in the farther West, where eager pioneers are turning to account the vast stores of natural wealth. Doubtless their population and business will double in another decade, and it would be no rash prediction to say that, by the beginning of the twentieth century, they will return to the census half a million of souls.

The States of Minnesota and Wisconsin have each a considerable extent of territory fronting upon Lake Superior, and the boundary line between them traverses the only good harbor at the head of the lake, the Bay of Superior. This fine bay, having a length of eight miles, and a width of from one to three miles, is sheltered from the lake by a narrow tongue of land


TOWNSHIP 49 NORTH
TOWNSHIP 50 NORTH
MINNESOTA
WISCONSIN
BAY OF SUPERIOR
LAKE SUPERIOR
TOWNSHIP 48 NORTH

called Minnesota Point, nowhere more than a pistol shot across, and in places so narrow that the spray of the lake waves in times of storm almost dashes over it. Into the upper part of the bay jut two other points, Rice's and Conner's, whose broad flat surfaces are well adapted for commercial and manufacturing purposes, and between these points the river St. Louis flows into the bay. It was only natural that each of the two States should desire to possess a commercial city at the head of the great lake, connected by railroad lines with the interior. For the development of such a city, Wisconsin had an evident natural advantage in an admirable site for the purpose, on a broad plateau facing the entrance to the bay; whereas Minnesota had only the narrow sandy spit bearing her name, and a steep hillside at its junction with the mainland, and vessels could only land in her territory by passing the Wisconsin landing and coming up the bay to Rice's Point. Upon the Wisconsin plateau, facing the lower bay, stood the town of Superior, laid out as long ago as 1860, and platted on a scale large enough for a city of 100,000 inhabitants, but containing at the time operations began on the Northern Pacific Road only a scant 800. Much of the town-site was owned by non-residents. Among the original owners were a group of Democratic statesmen of great prominence in public affairs before the War—Stephen A. Douglas, Jesse D. Bright, John C. Breckenridge, Beriah Magoffin, and also the eminent Washington banker, W. W. Corcoran. The place had no commerce to speak of, and no country trade, there being no farming district back of it, and it lived along in a sleepy way, on the hope of future greatness, to come from railway connection with the interior.

At the head of Minnesota Point a petty hamlet had come into existence, called Duluth, in honor of an early French explorer and trader. It was occupied by a few frontiersmen, who thought a town would eventually grow up at the head of the lake on Minnesota Territory, and who had early taken measures to secure claims to the land. The charter of the Northern Pacific Company made it optional with the Company whether it should make its lake terminus in Minnesota or Wisconsin, but before it could build in either State the consent of the Legislature was required. The Legislature of Minnesota carefully provided in the act giving such consent, that in case the Company should make its eastern terminus east of the eastern boundary of Minnesota, it should construct a line of road from its main line to the navigable waters of Lake Superior within that State. Wisconsin, less jealous of her interests, only required that the Northern Pacific should not, prior to the building of its line, allow any Minnesota company to enjoy its rights and privileges within the State of Wisconsin, and, further, that in case the Northern Pacific should not make a lake terminus within the territory of Wisconsin, it should give privileges of connection and traffic to any other company building from its main line to a Wisconsin port. The first railroad company to build to the head of the lake was the Lake Superior and Mississippi, controlled by Jay Cooke and other Philadelphia capitalists, who furnished the first money to construct the Northern Pacific. This company necessarily made Duluth its terminus, being a Minnesota corporation. The interest of the Northern Pacific (by purchasing for $500,000 an undivided half interest in the road from the junction to Duluth—twenty-three miles) made Duluth its lake terminus for the time. But Duluth had no harbor save the shallow upper end of the Bay of Superior. Mr. Cooke's plan was to build a spacious artificial harbor straight out into the lake, like the harbor of Cherbourg, in France—an enterprise which would have involved the expenditure of many millions of dollars. An attempt was made to create a temporary harbor by a construction of piles and timber, but a northwest storm swept it away. Then the idea of a canal across the narrow sand spit of Minnesota Point occurred to the citizens, and they set to work to dig it. From this canal arose an acrimonious strife with the town of Superior, in which the State of Wisconsin and the United States Government became involved. The citizens of Superior alleged that the waters of the St. Louis River would leave their natural channel and flow out through the canal, and they made such representations to the Government that proceedings were begun for a preliminary injunction to prevent the digging of the canal. The lawyers had to go to Topeka, Kansas, to bring the case before the United States Circuit Court. Justice Miller, of the Supreme Court, who presided, granted the injunction, but the papers were delayed in transmission so long that the Duluth people by working night and day got the canal cut through before the injunction was served. The result apprehended by Superior followed: a strong current set out through the new channel, and the old entrance to the bay shoaled three feet in the next gale.

Justice Miller had suggested in his opinion that a dike might be constructed which would prevent the river from leaving its old course, and so obviate the objections of Superior; and, acting on this suggestion, Duluth obtained permission from the Chief of Engineers at Washington to build a dike from Rice's Point to Minnesota Point, inclosing a small basin at the head of the bay for a harbor, communicating with the lake by the new canal. The dike was built at a cost of $110,000, but it was not made water tight. It did not stop the river from sending much of its water out by the canal, and it made a barrier to navigation which cut off the Superior people from sailing up the bay to use the new railroad at Duluth. An attempt was made one night, by a party from Superior, to blow up the dike with gunpowder, which was so far successful as to open a passage through which small boats could go. Meantime Duluth deepened her canal and obtained recognition for it from Congress in the form of an appropriation to build piers and a lighthouse, and to dredge out the snug little harbor into which it opened. After a time the Government ordered the dike removed as an obstruction to commerce, and it was partially demolished. Before this was done, however, a suit was brought against the City of Duluth and the Northern Pacific Railroad Company, which had aided in the canal and dike work, for compensation for the damage done to the harbor of Superior. This suit was withdrawn by Gov. Washburne, on the Northern Pacific Company agreeing to build a branch across Rice's Point and Conner's Point to Superior, and in conducting the business of its road, to place Superior and Duluth on an equal footing. To facilitate this compromise a bill was passed by Congress giving the right to bridge the St. Louis River between the two points.

Thus Duluth got her harbor and her railroad, while Superior got nothing but a promise, and was obliged to sit idly on her plateau and see a busy town grow up on the steep Minnesota hillsides at the upper end of the bay; the prize for which she had waited a quarter of a century having slipped through her fingers. Duluth grew apace; wharves and elevators were built on the sandy point, the forest was cleared from the slopes of the hills and an active commercial town leaped into existence. Everything went on prosperously until the panic of 1873 stopped construction on the Northern Pacific Railroad. Then the town collapsed and half its population abandoned it. Stagnation and discouragement reigned for five or six years, when better times brought a fresh growth. Saw mills and a charcoal iron furnace were established. With the settlement of western Minnesota and Dakota, more and more wheat came to Duluth for lake shipment, and more and more lumber was demanded by the interior. In the years 1881 and 1882 the growth of the town was remarkable. The population increased from 5,000 in 1880, to 12,000 in the spring of 1883. During the year 1882, 508 new buildings were erected, costing $1,438,315. The grain receipts, which in 1881 were 2,848,402 bushels, increased in 1882 to 4,198,833 bushels. Five new saw mills were established in 1882, and the total lumber product was 83,118,793 feet, besides 21,363,000 shingles and 10,528,000 lath. A railroad is now building to the Iron Range, an immense ledge of hematite ore about one hundred miles north of Duluth, which it is believed will make the town an important iron manufacturing point, bringing its coal from the Lake Erie ports and shipping its product westward by rail. The lake commerce of Duluth employs six lines of steamers and numerous sailing vessels. In 1882 there were 569 arrivals of steamers and 277 of sail craft—an increase of 184 arrivals over 1881.

Superior has experienced considerable growth of late, but cannot yet make comparison with its prosperous rival. Its present population, in the summer of 1883, is about 2,000. The Government has deepened the harbor entrance, and the town is beginning to obtain some benefits from lake commerce attracted thither by two lines of railroad—the Chicago, St. Paul, Minneapolis and Omaha, leading to St. Paul and Chicago, and the Northern Pacific. The Wisconsin division of the latter road was opened to Superior in December, 1881, under an agreement with leading citizens conveying to the Company an interest in the town site and the use of the water front; but the harbor improvements were not made in time for freight to be sent over the line until the season of 1883.

In concluding this account of the two ports at the head of Lake Superior reached by the Northern Pacific system, it may properly be said that the probabilities of the future indicate the development of a large city, which will have need of all the building sites, water fronts and harbor advantages of both places, and which will unite the two rival towns in one true metropolis. The distance from the north end of Duluth to the south end of Superior, be it remarked, is not half that from the north to the south end of Chicago, and with the bridging of the St. Louis River local travel will easily pass from one place to the other.

The town of Ashland, on Chegwamigon Bay, sixty miles east of Superior, will soon be reached by the Wisconsin division of the Northern Pacific road. It has a good harbor and is the lake terminus of the Wisconsin Central Railroad. As a third lake port of the Northern Pacific system, it will soon have increased importance. At present its population is about 2,000.

CHAPTER XXXV.

NORTHERN MINNESOTA.

Extensive Areas of Forest Land—Towns North of St. Paul—The Country Between Lake Superior and Brainerd—A Wide Stretch of Wilderness—Great Value of the Minnesota Timber Belt—The Lake and Park Region—Innumerable Lakes and Beautiful Groves—Detroit—Fergus Falls and its Water-power—The Great Valley of the Red River of the North—The Land of No. 1 Hard Wheat—Towns in the Valley—Breckenridge and Wahpeton—Fargo and Moorhead—The Natural Grain Belt of the Continent—Settlement of Northern Minnesota.

A LARGE part of the surface of Northern Minnesota is still, and must always be, covered with forests, the soil not being adapted for agriculture, even if settlers were willing to undergo the toil of clearing off the trees and undergrowth. In the pine belts the soil is light and sandy, and in many parts of the hard-wood districts the ground is so flat in large areas of surface that there is no sufficient drainage, and the water collects in swamps and countless ponds, making the earth cold and soggy. There are, however, extensive forest districts lightly timbered with oak, birch and maple, where clearings are made with profit after the heavier timber has been cut off for firewood and railway ties. American emigrants seldom go to these districts, preferring the open prairie, a little further west; but those forest-loving people, the Germans and Scandinavians, have planted thrifty colonies there. Along the St. Paul Division of the Northern Pacific Railroad, which follows the Mississippi Valley closely, many broad prairie openings occur, which have been tolerably well settled for the past twenty years. The towns of Itaska, Anoka, Elk River, Little Falls, St. Cloud and Saux Rapids are chiefly engaged in sawing the logs which are floated down the Mississippi and its tributaries from the pineries, and in grinding grain for the neighboring farmers. They are prosperous places in the main, but most of them seem nearly to have reached their limit of growth. East of the valley lie the most extensive pine forests of the State; west of it there is a thickly timbered hard-wood belt, screening as with a curtain of green a beautiful agricultural region beyond.

The main line of the railroad, running nearly due west from the head of Lake Superior, traverses a monotonous region all the way to Brainerd, a distance of 114 miles. The whole face of the country is covered with the original forest growth of dwarfish oaks, maples and birch, with here and there patches of tamarack, spruce or pine. Although this is the water-shed between the lakes and the Mississippi, the land is nearly level, and the little chocolate-colored streams wander aimlessly about, as if uncertain whether to make for the near reservoir of Lake Superior or to start on the long journey to the Gulf of Mexico. This great forest tract extends northward all the way to the Lake of the Woods, and is uninhabited save for the lumbermen's camps, where the little rivulets are deep enough to carry the logs to distant mills. Between Duluth and Superior at the head of the lake, and Brainerd on the Mississippi, there are no farms and no towns save the sawmill hamlets of Thomson and Aiken and the little railroad village of Northern Pacific junction. There is no reason to regret, however, that nature has made so much of Northern Minnesota an irredeemable wilderness. These dreary woodland stretches are of the greatest importance. Desolate themselves, they have virtually peopled the fertile prairies that sweep away westward in billowy undulations all the way to the Rocky Mountains, for they are the storehouses of fuel and lumber for the treeless plains—building the farmer's house and feeding his fire. But for their nearness to the Red River Valley and the Dakota prairies the settlement of these regions would have been indefinitely retarded. Cities, villages and farm-houses, railway ties, telegraph poles, and towering grain-elevators have all been cut out of these Minnesota woods. Remembering this, the traveler checks the expression, "What a wretched country!" which rises to his lips as he rides hour after hour through swamps and pine barrens, past sombre lakes and never-ending thickets, where the silence is only broken, when the noisy train stands still, by the croaking of frogs or the resonant ring of the woodchopper's axe.

Brainerd is a busy town of railroad mechanics and train men, built in the pine woods on the high bank of the Mississippi; and the people, with a good taste, rare in new western communities, have refrained from slaughtering the stately trees, and planted their pretty cottages among them, finding shelter from the keen northern blasts in winter, and from the summer sun under the evergreen canopies. The town boasts of 7,000 inhabitants, and is wholly the creation of the railroad. Further west the character of the country soon changes into a level or slightly rolling region of alternate prairie and woodland strips. Good farms and busy little towns are passed—each town with its tall wheat elevator, and its rows of little pine shops and dwellings, and all looking very much alike. In the first stage of the growth of villages along a new line of railroad, the business buildings are always placed as near the station as possible, on a street facing the track. If the place flourishes, a second business street is built crossing the track at right angles, and leading off into the country; but unless a large town grows up, the centre of trade is never out of sight of the arriving train. The locomotive is the great civilizer of new regions, and the settlers, to whom the railroad means comfort and prosperity, seem to find music in its bell and whistle. Among the well-established and growing towns in the farming country west of Brainerd are Verndale and Wadena, the latter a county seat and the terminus of the important branch railroad running to Fergus Falls, and thence across the Red River Valley far into Dakota. Further west is Perham, named in honor of the first president of the Northern Pacific Railroad; Detroit, Lake Park, and Hawley, which commemorates an excursion of Gen. Joseph R. Hawley, of Connecticut, to the Red River country in 1872, made as a journalist, in company with a party of famous men of that profession—among them Bayard Taylor and Charles A. Dana. At Detroit we are in the heart of a very peculiar and very attractive belt of country, appropriately called the Lake and Park Region, which has a length of about 200 miles, and an average width of 50, and borders on the east upon the flat and treeless plain of the Red River Valley. Lake Region it is, indeed, for there are so many lakes, big and little, that the inhabitants appear to have given up the task of finding names for them all. Some stretch out to the horizon in broad sheets of blue; many are bright little pools of a mile or two in length. Usually the shores slope gently up from pebbly beaches, and present graceful curves of bays and capes, with fields and meadows alternating with oak and maple groves. On a large map nearly one-third of the country appears to be covered with water, and the map presents a curious mottled appearance, like the peculiar paper bookbinders use. Between the lakes the land rises and sinks in knolls, hills and valleys, with pleasing curvatures of surface, broad stretches of wheat and pasture farms and many wooded tracts, where the trees stand in groups, with lawn-like openings between, and suggest the artificial arrangement of the parks on the estates of English noblemen. A prettier rural country, so far as nature has made it, one need not wish to see. In riding across it, every hill-top discloses a view of more lovely lakes, each with some claim to individuality of slope or landscape setting, to distinguish it from the rest.

Not only is the Lake and Park Region a very pretty country; it is also a very fertile country. The open lands are excellent for general farming—not quite as productive of wheat as the Red River Valley lands further west, but, from their excellent drainage, not liable to the drawback of an occasional wet season, which once in four or five years reduces the yield of the Valley farms. Then the farmers here have the great advantage of an abundance of hard wood for fuel and fencing on their own estates, or close at hand, and the pleasures of fishing and shooting on the lakes; to say nothing of the saving from being able to supply their tables abundantly with black bass, pickerel, white fish, and muscalonge, and with wild duck. A good farm fronting on one of these clear, blue lakes, gives the most agreeable conditions of rural life to be found in the Northwest—mellow, fertile fields for crops, excellent pastures and meadows, broad woodland tracts for timber and the home fires, fishing, hunting, and boating for recreation, and railroads and towns near at hand. Land is naturally held at higher prices than out on the prairies, and there is none left for the homestead settler or for purchase at the low prices of railroad comnies. Still, good land can be bought at $10 or $15 an acre, and improved farms for $20 or $25.

Detroit, whose lovely lake is fast becoming a summer resort, is one of the principal towns of this region; another, and the largest in the region, is Fergus Falls, fast developing into a considerable manufacturing town. Here the Ottertail River comes leaping down from a group of lakes to the plain of the Red River, making a succession of rapids and cascades, which form a remarkably good water power, scarcely varying in volume the year round, neither swelling in dangerous freshets, nor dwindling in summer droughts. This water-power has already (in 1883) produced an active town of about 6,000 inhabitants in five years' time, and is not yet utilized to the extent of one-fourth of its capacity. Fergus Falls is built on more hills than ancient Rome, and, oddly enough, on the top of one of them, high above the neighboring business street, is a pretty little lake, two or three miles in circumference. Instead of draining it off with the view to sell its bed for town lots, as the prevalent utilitarian spirit of the West must often have suggested, the people have spared the groves on its banks, and laid out a drive and promenade skirting the shore, on which they are building handsome residences. Other growing towns in this region are Pelican Rapids and Sauk Centre. The region ends on the north at the pine country around Red Lake, and on the east at the low forest tract skirting the Mississippi Valley, while on the west it is bordered by the treeless plains, which are relieved by no forests nearer than the advanced spurs of the Rocky Mountains—the Bull, the Big Horn, and the Judith ranges. It is traversed by the main line of the Northern Pacific Railroad and by two of its branches—the Little Falls and Dakota and the Northern Pacific, Fergus and Black Hills Railroads, and also by one of the main lines and one of the branches of the St. Paul, Minneapolis and Manitoba Railroad.

Upon their western front the woodlands leave off quite abruptly, as if unwilling to descend to the low plain, and the surface becomes less and less undulating until, a few miles beyond the timber boundary, the level prairie stretches away to the horizon line. This is the great Valley of the Red River of the North, first discovered two centuries ago by French voyageurs pushing their pirogues up the tortuous course of the muddy stream from their fur-trading station near Lake Winnipeg. The land is almost a dead level, and the grassy surface is featureless save where there is a fringe of alder and cottonwood along a stream, and where farm-houses, strawricks, railway stations and towns relieve its endless monotony of aspect. The land, as all the world now knows, is of great and inexhaustible fertility, and particularly valuable for the production of spring wheat. Settlement on the American side of the international boundary only dates from the opening of the Northern Pacific Railroad across the valley in 1871 and 1872; yet the crop of "No. 1 hard wheat" is already one of the important elements in the grain trade of the world, though scarcely one acre in five of the valley has been plowed. All the rest is virgin sod awaiting immigration and industry.

The Red River cuts the valley in two from south to north nearly midway of its width, and divides Minnesota from Dakota. A notable fact showing a tendency of growth akin to that which — other things being equal—causes cities to be built on the western shore of rivers rather than their eastern banks, is the more rapid settlement of the Dakota side of the valley. Although the land is as good and as ample in area on the Minnesota side, the greater part of the incoming tide of population pushes across to Dakota. On that side are the chief towns of the valley—Wahpeton, Fargo and Grand Forks. Facing Wahpeton, across the narrow stream, is Breckenridge, the oldest town, save the Hudson's Bay Company's post of Georgetown, in the entire valley, yet scarce a third as large as its Dakota neighbor. Facing Fargo in a like situation is the town of Moorhead, which can count perhaps half as many inhabitants as its more successful rival, but makes creditable efforts to keep from lapsing into the condition of a suburb, and has more brick buildings than Fargo, and the largest and best-appointed hotel northwest of Chicago. Moorhead has 4,000 inhabitants; Breckenridge, about 1,000; Morris, further up the valley, also about 1,000. Below Moorhead there are a few small towns on the Minnesota side, which need not be noticed here. The Red River cuts a deep channel through the black loam of the prairie, and is navigable as far up as Wahpeton for little steamboats which pull after them grain-laden barges, and thus supplement the well-developed railway system of the valley. It seems certain that this valley and the rolling prairie country beyond it is destined to be the ultimate and permanent granary of the American continent. The wheat belt has been moving west for a century, commencing in the valleys of the Connecticut and the Mohawk and constantly abandoning its old fields to other crops, and following the advance of civilization across Western New York, Ohio, Michigan, Indiana, Illinois, Iowa, Wisconsin and Minnesota. It can go no further, for it has already reached the high central plateau of the continent, where there is not moisture enough for the growth of the cereals. Now it must halt and remain. In Dakota and Western Minnesota, and in the Canadian Province of Manitoba further north, wheat will always be the staple crop, as it has been for centuries in the valley of the Lower Danube and on the great plains of Southern Russia. The land in this new granary of the Northwest is perfectly adapted to farming on a large scale by machinery, and to the most economical production and handling of the crop.

A word of historical reference should perhaps be added to this brief sketch of Northern Minnesota. Some scanty settlements had reached this section when the Indian outbreak of 1862 occurred. The few pioneers perished at the hands of the savages, or, if they fortunately escaped, fled to the towns on the Upper Mississippi for refuge. After the Indians were subdued the Government removed all the bands concerned in the massacre beyond the limits of the State, and the refugees returned to rebuild their homes. Settlement progressed very slowly until railways began to advance from St. Paul and Duluth toward the Red River in 1870 and 1871. Soon after, the financial panic of 1873 checked railway operations for several years, and greatly diminished the movement of Western emigration. A little later the grasshopper plague fell upon the struggling pioneers on the Minnesota border, sweeping the ground bare of all growing crops. Clouds of insects settled upon the earth and devoured every green thing. Their eggs hatched out a fresh swarm next year; but these, moved by some mysterious instinct of migration, all rose into the air just a year after the arrival of their progenitors and flew off to the eastward. Since then there has been no similar visitation, but it was two or three years before the region had recovered from its heavy losses. Indeed many of the settlers gave up their lands in despair and returned to their old homes in the East. Thus the present development of the country can hardly be said to date back more than seven or eight years—a fact that testifies strongly to the productiveness of the soil and other advantages of the region.

CHAPTER XXXVI.

NORTH DAKOTA.

Portion of Dakota lying North of the 46th Parallel—North Dakota a Vast, Rich, Alluvial Plain—The Red River Valley—The James, Sheyenne and Mouse Rivers—Devil's Lake—The Missouri and its Tributaries—The Coteaux—Fertile Regions West of the Missouri—Dakota's Railroad System—Chief Towns of North Dakota—Origin of Bismarck and Mandan—Climatic Peculiarities—A Dakota Winter—Prairie Landscapes—The Charm of Vast Spaces and Wide Sweeps of Vision—Lignite Coal Fields—Singular Scenery of the Bad Lands—An Admirable Grazing Country.

BY common consent, North Dakota includes that portion of the immense Territory lying north of the forty-sixth parallel of latitude. Two years ago there was a belt of vacant country between the settlements along the line of the Northern Pacific Railroad and those created by the opening of the lines of the Chicago and Northwestern and the Chicago, Milwaukee and St. Paul Railway systems which traverse the southern part of the Territory, and between these two regions there was no direct communication; travelers being compelled to go around through the States of Minnesota and Iowa to reach points in their own Territory, distant, perhaps, only one or two hundred miles. Thus two distinct communities grew up, each with its towns and its railway systems, bound together by the bond of a single territorial government, but having no other interests in common. The open country lying between the advance settlements of the two sections has filled up of late, however, so that now the dividing line is no longer a real one, and in going from north to south in any portion of Dakota east of the James River, one is never long out of sight of a homesteader's house. For the purposes of this work, however, the term North Dakota, as popularly used, will be employed to designate the region lying north of the forty-sixth parallel, which alone will be regarded as coming within the Northern Pacific belt.

North Dakota, generally speaking, is a rich alluvial plain, level on its eastern side and upheaved in the centre and west into rolling plateaux and low ridges and hills. It is wholly destitute of trees, except narrow fringes of soft wood timber along the borders of streams and a considerable body of oaks and some other varieties of hard wood growing near the Manitoba line on a group of high hills called Turtle Mountain. The entire surface, save where broken by the plow, is covered with a thick carpet of grass. There is no waste land, and very little land not sufficiently fertile to produce crops. On the east the region is bounded by the Red River of the North; a narrow, tortuous stream, which has cut for itself a deep canal-like channel in the alluvial soil, and is bordered for about thirty miles on either side by a flat valley, too low and level in places for drainage, so that a good deal of the snow and rain-fall accumulates in shallow ponds and spreads out over the fields to be evaporated by wind and sun. Through the same valley runs the Sheyenne River, which first goes south for a hundred miles, as if making for the Missouri, and then doubles on its course and finally discharges its waters into the Red. Further west is the James or Dakota River, running parallel to the Red, at a distance of about one hundred miles from it, but in just the opposite direction. North of the sources of the Sheyenne, but not drained by it, is Lake Minnewaukan, or Devil's Lake, a body of water fifty miles long by from one to five wide, which receives the drainage of a large area of country but has no outlet. Its waters are impregnated with alkali. Northwest of this saline lake the Souris or Mouse River makes a loop of about a hundred miles long down into Dakota from the British possessions, and returns to its native soil to lose itself in the Assiniboine. From northwest to southeast the Territory is traversed by the mighty flood of the Missouri. It receives no considerable tributaries from the east, but from the west a number of large streams, such as the Knife, the Heart, the Cannon Ball, and the Little Missouri, flow into it. Bordering the Missouri on the east is a singular plateau called on the early French maps the Plateau du Coteau du Missouri, a name which has been accepted by all geographers, but being much too long for popular use has been abbreviated in Dakota to "the Coteaux;" singular, because lying so close to a great river which it feeds neither with springs nor with the surface water of its rainfalls and melting snows. The Coteaux have no streams, and are cut by no valleys long enough to serve as conduits to carry off the water. The surface of the plateau is so irregularly upheaved in low hills and ridges that the water collects in innumerable ponds which have no outlets. Some are large enough to be named as lakes; most of them are small and nameless.

East of the Missouri River, North Dakota is generally divided, when speaking of its agricultural merits, into the Red River Valley, the James River Valley, the Coteaux, the Missouri Slope, and the Devil's Lake country. It is all remarkably well adapted by nature for the production of wheat and the other small grains. In a dry season the moist Red River lands produce the best crops; in the wet season these lands are surpassed by those of the James River Valley, which are higher and better drained, and by those further west on the Coteaux and the "Slope." The Devil's Lake Country is newly settled this season (1883) and comparisons can hardly be made with it. The first settlers in North Dakota, halting in the Red River Valley and finding the soil marvellously productive, were disposed to think they had reached the end of things and to depreciate the regions further west. A little later it was found that the rolling prairies were just as valuable for wheat as the great bottoms, but for several years nobody tried farming on the Coteaux or the Missouri Slope. When the experiment was made it was fully as successful as were the great bonanza farms in the Red River Valley. Within the last two years, only, the fact has been amply demonstrated that the whole country east of the Missouri is an agricultural region, adapted for general farming, and especially for raising wheat, oats, barley, and potatoes. In 1882 people began settling west of the Missouri River along the Heart and Knife Rivers and their tributaries, and upon the high prairies where they head. Until then the Northern Pacific Railroad traversed a desolate country, where the only inhabitants were the section men keeping its track in order. The land was fair to look upon, with its carpet of grass and flowers and the pyramidal buttes and miniature table-mountains on the horizon, and the soil was evidently rich, as shown in the cuts along the track, but there was so much vacant country east of the Missouri to fill up that no one seemed to be willing to try farming so far out towards the line of deficient rainfall. Finally, late in 1882, several colonies were started, and the emigration of 1883 has developed them into prosperous communities with pretty villages and promising farms. In time the whole country as far as the Bad Lands of the Little Missouri, on the extreme western border of Dakota, will be occupied by settlers.

The railroad system of North Dakota is already well advanced. The whole Territory is traversed from east to west by the Northern Pacific main line, which throws off a branch southwest for a hundred miles from Fargo, another north to Devil's Lake from Jamestown, and, besides, enters the Territory with one of its Minnesota branches, which runs across the Red River Valley fifty miles west of Wahpeton. The north and south lines in that valley belong to the St. Paul, Minneapolis and Manitoba Company, and there are three of them, one running to the Manitoba boundary, with a western spur to Devil's Lake. Fargo, on the Red River, is the chief town in North Dakota; an ambitious, energetic place, believing strongly that its destiny is to be a large city. Its history dates from 1872, but it had barely 500 inhabitants in 1877, so that its present importance as a busy town of eight or ten thousand inhabitants is an achievement of about six years. Next in rank in respect of population is probably Grand Forks, about seventy miles north of Fargo, on the Red River, and afterwards, in the order mentioned, Bismarck, Jamestown, Mandan, Valley City, and Casselton, all on the main line of the Northern Pacific, and Pembina on the Manitoba frontier. Other important towns are Lisbon and Lamoure, on the Fargo and Southwestern Branch of the Northern Pacific Railroad, and Carrington, on the Jamestown Northern Branch. Fargo was named in honor of Wm. G. Fargo, of the Wells, Fargo Express Company, who was long a director in the Northern Pacific Company; and Casselton in honor of General Geo. W. Cass, who was a director for many years, and, for a time, president of the Company. Bismarck was originally named Edwinton by Thomas P. Canfield, who selected the town site, in honor of Edwin F. Johnson, the first chief engineer of the Company; but the name was changed by resolution of the board of directors, who desired to compliment the great German chancellor.

Mr. Canfield, as president of the Lake Superior and

Puget Sound Company, a subsidiary corporation formed to lay off and sell town sites, traversed Dakota from the Red River to the Missouri in the summer of 1872, following the surveyed line of the railroad, to select locations for future towns. At that time there was but one white settler on the whole route, a Mrs. Bishop, who had a log hut where the village of Mapleton now stands. Mr. Canfield was accompanied by General Rosser, Dr. Thayer and E. H. Bly. The site of Bismarck was selected because of the neighboring high bluff on the Missouri, affording a good approach for the construction of a bridge, and because of its fine plateau, far above high water, with a view reaching forty miles down the river. The location of most of the large towns on the railroad was determined by the point where the railroad crossed a stream, as at Valley City and Jamestown. Mandan was built on the first available ground for a town beyond the low bottoms which skirt the Missouri for a mile in width west of the Bismarck bridge. Dickinson was named for the town site progenitor, W. S. Dickinson, of Malone, New York, formerly a member of the Senate of that State, whose efforts to build up a town far west of the Missouri have at last been rewarded with success. Other towns and stations having some historical interest through their names, are: Tower City, named for Charlemagne Tower, formerly a Northern Pacific director; Gladstone, for the great English statesman; and Fryburg, for General Fry, of the army.

The climate of North Dakota is cold in winter and warm in summer. There is scarcely any spring. When the cold weather leaves off the summer begins, and vegetation grows with surprising rapidity. The autumn is the most agreeable season. In summer it is as hot as in southern latitudes, but the twilights are long and refreshing, and the nights always cool. Only in the midday hours does the high temperature prevail. Winter begins in November and lasts until April, and the snowbanks in the hollows usually remain well into May. A temperature of thirty or forty degrees below zero is not unusual, and there is sometimes an entire month when the mean temperature is not above zero. Except when high winds blow, the cold is not severely felt, however, by reason of the dryness of the atmosphere. Indeed the winter is not as much dreaded or disliked by the inhabitants as is the same season in lower latitudes, where frequent changes of temperature occur, with a raw, damp air, cold rains, and melting snowfalls. Dressed in fur caps and mittens, and long buffalo-skin cloaks, the Dakota farmers and townspeople go about their outdoor vocations without discomfort when the mercury stands a long way below zero. Only when the blizzards blow, and the air is filled with fine, blinding particles of dry snow, do they think it needful to stay indoors. Most winter days are clear, bright and still. The long season of good sleighing is used by the farmers for hauling fuel, marketing grain not disposed of soon after the harvest, and visiting the towns.

Dakota scenery is not as monotonous as might be supposed by one not accustomed to the treeless plains. Traveling over these wide spaces gives a sensation of vastness and sublimity such as one experiences at sea. Here, in the absence of conspicuous features, the minor variations of surface attract attention, and every object on the horizon looms up into unnatural proportions. The one-story "claim-shanty" of the new settler looks like a tower, the rude barn, one-fourth cabin and three-fourths straw-rick, seems a gigantic dismantled castle, and the horseman approaching it like the giant of a fairy tale. The eye sweeps vast spaces and rejoices in its powers of distant vision. In the hilly country along the Missouri there are magnificent outlooks over miles of valley, buttressed by gigantic slopes and far-reaching stretches of billowy green uplands, flecked by the shadows of passing clouds. Beyond the Missouri there is much variety in the landscapes. The buttes which rise boldly from the grassy plains, though only low hills, have the form and look of mountains, exaggerated in their apparent height by the thin, clear atmosphere. Nor must one forget the ponds which diversify the country on the Coteaux, and are the homes of all sorts of water-fowl, from humble brown mud-hens to big mallard and teal ducks, and screaming curlew.

West of the Missouri River the country is more broken than upon the Coteaux, the hills being higher, and the drainage running into a number of streams which flow into the Missouri through narrow valleys. The land is fertile to the tops of the hills, and covered with a luxuriant growth of native grasses. Timber occurs only along the water courses. Veins of lignite coal abound, cropping out from the hill sides so conveniently that the settlers obtain an abundant supply for domestic purposes at no greater cost than that of cutting it out with picks and loading their wagons at the exposed faces of the seams. At Bly's Mine, at the town of Sims, 35 miles west of the Missouri, systematic mining is carried on to supply the locomotives of the railroad. Other mines are being opened on the line. In a treeless country, where fuel would otherwise have to be brought from the Minnesota forests or the Ohio mines, these deposits of lignite are of inestimable value. The coal has about three-fourths the heat-producing capacity of ordinary bituminous coal.

About fifty miles west of the Missouri the country traversed by the railroad loses its pronounced hilly character, and broad expanses of prairie are crossed, bounded on the north and south by isolated buttes or low ridges. These prairies have a rich loam soil, underlaid with clay, and are exceedingly attractive to the eye of a farmer. In this section, as already mentioned, several agricultural colonies have been planted within the past year, each with its central town on the railroad. The entire region between the Missouri and the Bad Lands appears likely to be found valuable for occupancy by settlers who combine farming with stock raising. If a commercial metropolis of the region can be indicated at this early day, it will be Mandan, at the junction of the Heart River with the Missouri, which occupies a position in relation to the extensive fertile country west of it analogous to that of Omaha toward Nebraska.

The fertile prairies and valleys of Western Dakota tributary to the Northern Pacific Railroad terminate near the western boundary of the territory in that singular and picturesque region known as the Bad Lands of the Little Missouri; the Mauvaises Terres of the early maps, the Pyramid Park of the recent railroad guides. It is difficult to convey in words an adequate description of this region, because it resembles no other district of country in the world, and a familiar comparison cannot therefore be summoned to the writer's aid. Originally the region appears to have been a level grassy plateau. Then the elements of fire and water ran riot through it for centuries, tearing up the ground in profound creases and furrows, tossing up huge mounds, and bastion-like precipices, turning the blue clay of the upheaved earth into seams, cliffs and castellated peaks of red terra cotta, strewing the valleys with the vestiges of petrified forests, and shaping masses of rock into strange resemblances to animals and human beings. A view over this wonderful region from the summit of one of the lofty buttes conveys the most singular combination of impressions—

beauty, grandeur, grotesqueness, and above all, the weird and fantastic. The landscape is so strange and unearthly that the spectator imagines himself transported to some other planet, where nature is still in the midst of its primal throes and processes. In many places the fires of long-past geological periods are still burning beneath the surface, sending out sulphurous clouds, cracking the earth in deep fissures, producing pits and smoking crevasses where the ground has fallen in, and converting the clayey soil into masses of red scoria. Yet everywhere in the valleys in this strange region save on the faces ot the steeper buttes the grass grows luxuriantly, covering even the high summits and the plateau five hundred feet above the valleys, and herds and flocks find pasturage the year round. The Bad Lands form an admirable grazing country, its rugged character serving to break the force of the winter winds and its deep depressions affording shelter to stock. The region is fast being occupied by ranchmen. Roughly measured, it may be said to be a hundred miles long by thirty wide, and it is traversed from north to south by the Little Missouri River, a swift muddy stream.

A stretch of rolling prairie, inviting to the herdsman, lies beyond the Bad Lands of the Little Missouri, having a width of about thirty miles as the railroad crosses it; then come the Bad Lands of the Yellowstone, a mass of low mud and sand mountains, worn by water into curious forms, but rarely showing traces of the action of fire. The broad bands and masses of red scoria, capping the high hills or covering their sides in the Mauvaises Terres of the Little Missouri are wanting; but there are many novel mushroom-like formations, where a flat sandstone rock has protected the clay beneath it from the action of the rain, and as the ground below has been washed away has gradually become elevated to great height.

The sides of the buttes are of a bluish-gray color, seamed with dark bands of lignite coal. This second belt of Bad Land country is inferior in interest to the tourist, and of much less value for cattle and sheep raising than that lying along the Little Missouri.

CHAPTER XXXVII.

MONTANA.

Extent of Montana—A Larger Area than that of Great Britain and Ireland—Two Distinct Regions—The Plains and the Mountains—Vast Stretches of Treeless Country Covered with Bunch-Grass—Rich Irrigable Lands along the Rivers—Chief Towns of Eastern Montana—Indian Reservations—Western Montana, its Mountain Ranges and Fertile Valleys—Heavy Crops of Small Grains—Mining for Precious Metals still the Chief Industry—Coal and Iron Deposits—The Lumber Business —Principal Mountain Towns—Montana's Climate—Influence of the "Chinook Wind"—Some Peculiarities of Climate—Beautiful and Varied Scenery—A Land of Wonders and Surprises.

THE Northern Pacific Railroad traverses the Territory of Montana throughout its greatest length, entering it on its eastern border and leaving it not far from its north-western corner, with a total length of main line track within its limits of 743 miles. With the exception of the crossings of the Belt Mountains, the Rocky Mountains, and a spur of the latter west of the Missouri, the line runs in valleys for this entire distance; thus justifying the name given by Governor Stevens to the Northern Pacific route in his report of the first survey, of "the Valley route across the continent." The area of Montana is larger than that of Great Britain and Ireland. Its length from east to west is 540 miles, and its greatest width from north to south is 305 miles. It is without natural boundaries, save on the West, where its frontier is the lofty range of the Bitter Root Mountains. It has no unity in respect to physical geography, being composed of two distinct regions—one of high, rolling, grassy plains seamed by narrow valleys, and the other of a complex system of mountain ranges, groups and spurs, bordering long strips of rich, alluvial valleys, and in places inclosing large basins of nearly level, open country. The plain region embraces all of Montana east of the advanced spurs of the Rocky Mountains. It is watered by the Missouri and the Yellowstone and their tributaries, and is a vast pasture, formerly supporting millions of buffaloes, and now being rapidly occupied for cattle and sheep ranges. In this section there is no timber save the belts of cotton-wood which fringe the streams and a little dwarf pine in ravines near the mountains. The country looks pretty enough in May and June when the grass is green and flowers abound, but the vegetation soon loses its freshness, and valleys, slopes and far-reaching plains present no colors save dusty yellows and browns. A desert-like look is worn by the landscapes all the rest of the year. The country is by no means a desert, however; for the dry herbage growing in little tufts, with spaces of bare earth between, is the nutritious bunch-grass, which seems to combine the food qualities of both hay and grain, and which supports cattle, horses and sheep the year round. The grass cures itself where it grows. In winter the snow-fall is usually light, and is always so dry that the slopes are swept bare by the wind, so that stock find feeding-ground in the severest weather. The business of stock-raising on these enormous natural pastures is assuming greater importance every year, and will be a permanent industry. Farming is only practicable on the bottom lands and bench lands in the narrow valleys of the streams, and, with the exception of a few localities, irrigation is required for the regular production of crops. The Yellowstone and its main tributaries, the Powder, the Rosebud, the Tongue, the Big Horn, and the Clark's Fork, afford many long stretches of rich bottom land, easily irrigated and exceedingly productive of the small grains and of vegetables. The Musselshell has also an agricultural valley. Rarely are the valleys of these rivers more than a mile or two wide, and they are hemmed in by steep bluffs from two to five hundred feet high, or by what are known as bad-land formations—bare, crumbling buttes of clay and sandstone. These forbidding walls are, however, only the escarpments of the grassy, rolling, table-lands, through which the rivers, in the lapse of ages, have worn their deep crevice-like valleys.

The chief towns of Eastern Montana are Glendive, Miles City and Billings, on the Yellowstone, and Benton, at the head of navigation on the Missouri. They are all prosperous trading points, shipping cattle and wool, and each supplying a large area of grazing country with goods. The valley of the Yellowstone near each is cultivated. Above Billings there is a stretch of thirty miles of bottom irrigated by a main ditch. At Miles City the valley of the Tongue River joins that of the Yellowstone, and is settled by farmers for fifty miles. A large part of Eastern Montana is still occupied by Indians, who possess two enormous reservations. That of the Crows fronts upon the Yellowstone for two hundred miles and is larger than the State of Connecticut, although the tribe numbers only 3,000 souls. Most of the region north of the Missouri is set apart for the Piegans, Blackfeet, Gros Ventres, Ariekarees and Mandans, who together number less than 10,000, and are allowed to hold a territory greater in extent than the State of Ohio. These great reservations will, no doubt, soon be cut down by Congressional action to a size commensurate with the uses of the Indians, thus adding to the grazing districts of Montana available for settlement many thousands of square miles.

With this brief glance at the plains, let us now turn to the mountain regions of Montana. The mountains are all embraced in the Rocky Mountain system, and the ranges have a general trend a little west of north. Besides the main range forming the continental water shed between the Missouri and Columbia, there are many spurs, lateral ranges, and partially isolated groups. None of the peaks are as high as those of Colorado, the loftiest exceeding but little 10,000 feet, and the passes are much lower than those in the same range further south. The valleys and "parks" or basins inclosed by the mountains are also considerably lower than the parks of Colorado, and for this reason are available for agriculture. These basins range in altitude from 3,000 to 5,000 feet, and form the principal grain producing areas of the Territory. They are supposed to be the beds of former lakes which have received from the washings from the surrounding mountains their deep alluvial soil. The rivers run out of these basins in cañons, or very narrow valleys, and into them come leaping down countless swift streams from the mountains, supplying abundant water for irrigation. The best of the agricultural basins or valleys are those of the three forks of the Missouri, the Gallatin, the Jefferson, and the Madison, of the Missouri itself below its first cañon, of the Beaver Head, and the Prickly Pear, and the Judith; and west of the Main Divide those of the Deer Lodge, the Missoula, and the Bitter Root. The latter, a valley 90 miles long with an average width of seven miles, is the most extensive and attractive of all. Its altitude and that of the valley of the Missoula into which it debouches, is only 3,000 feet, or about 1,500 less than that of the rich grain-growing valley of the Gallatin; and it has a mild climate, favorable to fruit culture. In all these irrigable valleys farmers raise heavy crops of wheat, corn, and barley, watering their fields with moderate labor by the aid of small ditches, and finding a home market for all their surplus products in the mining towns and upon the stock ranches. Besides the small grains, all the root crops thrive abundantly. Montana potatoes, especially, have a flavor, a solidity and a keeping quality nowhere excelled. In the Bitter Root Valley Indian corn is raised, and apples, cherries, and berries are produced. Montana farmers are favorably situated in many respects. Their produce sells for higher prices at home than it would bring in New York City, the demand being greater than the supply. They are able by irrigation to raise larger crops than are raised in the best agricultural sections of the West, such as Illinois or Iowa. Their fields are neither parched by drought nor flooded by excessive rainfall, and experience teaches them how much water to supply from their ditches. Then there are ample pastures on the mountain sides open for ranges for their herds, and they often grow rich by the increase of their cattle and horses while living in comfort upon the yield of their fields.

Mining for the precious metals is still the chief industry in Montana, but will soon be outstripped in its annual returns by stock raising. The yearly yield of gold is, in round figures, $3,000,000; and of silver, $3,500,000. Copper is beginning to make a considerable figure in the mining statistics. Since 1862, Montana has yielded more placer gold than any other State or Territory except California, the total amount being stated as high as $130,000,000. The silver industry is of more recent date, and centres at one place—Butte, on the western slope of the Main Divide. Gold is found in quartz seams and placer deposits on both slopes of the Main Divide, and also east of the Belt Range, in the Judith Mountains, and in the Yellowstone Mountains, on the head waters of the Clark's Fork of the Yellowstone. There is very little of the old-fashioned placer-mining carried on, most of the present yield being from quartz. Hydraulic mining, which sweeps down whole acres of ground with powerful streams of water, is prosecuted at the heads of several of the once famous gulches, where miners used to wash the pay-dirt with pans, sluices, and rockers. Copper mining has of late become an important industry at Butte, and good undeveloped seams of this metal exist in other localities. Deposits of iron ore exist in many parts of the Territory, but have not been worked. Coal abounds. Near the Yellowstone, Musselshell, and Missouri Rivers, there are immense beds of lignite, easily worked, where they crop out from the bluffs along the valleys. Veins of a harder coal, which can be coked, have lately been found in the Bull and Belt Mountains. Evidently the mining industry of Montana is destined to much greater development than it has yet attained. Population and capital begin to flow through the Territory along the line of the new railroad, seeking promising openings for enterprise. It is not probable that new placers will be discovered, but there are hundreds of veins of low-grade ore, yielding enough gold and silver to make their working a reliably profitable business now that rail transportation is close at hand, which could not be opened with any chance of success when machinery and supplies had to be hauled for hundreds of miles over mountain roads. Besides, there is great promise of prosperity in the coal and iron industries, the beginnings of which have scarcely yet been made.

One more important industry remains to be mentioned—that of lumber production. In the northwestern portion of Montana there is an immense forest belt stretching along both sides of the Pend d'Oreille or Clark's Fork River for nearly two hundred miles, and extending beyond to the British boundary, and west into Idaho, around the beautiful mountain lakes of Pend d'Oreille and Cœur d'Alène. The timber is Rocky

Mountain pine, fir, spruce, cedar, tamarack, with a little white pine, and the growth is very dense. The business of cutting lumber in this magnificent forest began when the railroad penetrated it, and was at first confined to supplying the wants of the road. Now that the forest is traversed from end to end by the track, mills are being established to supply with building material and fuel the farming valleys and mining districts of Montana and the great treeless agricultural plain of Washington Territory.

In the mountainous portions of Montana the principal towns are Livingston, at the head of the Yellowstone Valley, a new creation of the railroad, hopeful of rapid growth from the development of coal and iron mines, and already enjoying considerable trade with the grazing country north of it, and with the tourist travel that goes over the branch railroad to the National Park; Bozeman, the prosperous trading centre of an extensive agricultural region; Helena, the capital of the Territory, and the chief commercial town; Butte, the centre of the most productive mining district; Deer Lodge, a pretty place, with good educational advantages, and some tributary mining and agricultural country; and Missoula, at the junction of the Bitter Root and Missoula valleys, chiefly an agricultural trading point, but lately turning its attention to lumbering and mining. Of these, Helena and Butte are the largest, and have probably, at this time, 1883, seven thousand inhabitants each.

In Montana, climate depends largely on altitude. Generally speaking, the whole region has a much lower mean annual temperature than Dakota and Minnesota, which lie within the same lines of latitude, and the further west one goes on east and west lines the milder are the winters. The mean temperature of the Bitter River Valley, which is in the latitude of Northern Maine, is about the same as that of Pennsylvania and Central Ohio; that of the Gallatin Valley, which is about 1,500 feet higher, compares with Central New York. The isothermal line of 50° Fahrenheit, which passes through Harrisburg, Cleveland and Chicago, runs from southeast to northwest through Montana and passes into the British possessions. This fact is explained by the influence of the great Japan Ocean current, which produces what is known as the "Chinook wind," greatly modifying the climate of the north Pacific coast and blowing across the low passes of the Rocky Mountain ranges through the valleys of Montana. It is interesting to note, as bearing upon the matter of climate, that the average altitude of Montana is only 3,000 feet, while that of Colorado is 7,000, of Wyoming 6,000, and of New Mexico and Nevada 5,600. It is this peculiarity, as well as the warm western wind, which give to the Territory its mild winter climate and make its bunch-grass plains much better stock ranges than those of the territories further south. In Eastern Montana not much snow falls. In the central valleys there is more, and it is not so dry; while in the northeastern portion, mainly covered by the Pend d'Oreille forest, snow sometimes falls to the depth of three feet. It does not remain long, however, being soon melted by the "Chinook." Almost every valley has some local peculiarity of climate, depending upon its altitude and the height and trend of the neighboring mountain ranges, but the whole Territory may fairly lay claim to the blessings of a pure stimulating atmosphere, and freedom from malaria. From what has been said of the mild climate, the impression should not be gathered that there is no extremely cold weather. There are cold snaps every winter, when the mercury goes down to 30°, 40° and sometimes even to 50° below zero, but they are of short duration, and the dryness of the air makes the low temperature less dangerous and less perceptible than is the lowest range of an ordinary winter in the Middle States. In summer, on the other hand, there are days when the thermometer will register 90° in the shade, but this will only be in the midday hours, the evenings being always cool and blankets being invariably needed at night.

The scenery of Montana is wonderfully varied and attractive. In the eastern portion the wide, breezy plains, the fantastic buttes of sandstone and indurated clay that border the water courses, and the deep, rich alluvial valleys have their peculiar charm. Once among the ranges of the Rocky Mountain system, the traveler finds new beauties at every mile of his journey. There are isolated groups of sharp, snow-flecked peaks, like the Crazy Mountains, great glittering domes and ridges like the Big Snowy, great billowy pine-covered ranges, like the Belt Range and the Main Divide, with many pyramidal peaks towering above the general summit, and huge swelling buttresses of rock and snow like the Bitter Root Mountains. In the midst of all this tumultuous sea of mountains lie smiling green valleys with flocks and herds, presenting Alpine pictures of pastoral life. Then there are profound clefts in the mountain walls, like the two great cañons of the Missouri and the superb cañon of the Pend d'Oreille, where the tremendous brown cliffs take on strange bright colors from the decomposition of metallic strata; lovely lakes, like Flathead Lake, and many cold deep pools high up near the snow on dizzy mountain shelves. Charming natural parks are traversed where the open woodland growth and the grassy ground bordering swift rivulets suggest camp life and long excursions in the saddle, and dense forests where the light of day scarcely penetrates. It is a land of surprises, of wonders and of adventure, which will become in time the pleasure-ground of America, as Switzerland is now the pleasure-ground of Europe.

The future of this vast and attractive region it is not difficult to predict. It can never maintain a dense population, but its valleys will fill up with farmers carefully cultivating the rich soil by the aid of irrigating processes; its immense bunch-grass pastures will support a hardy adventurous race of stock-raisers, loving the saddle and an outdoor life; its mines of the precious metals will be extensively developed by the cheapening of machinery, transportation and labor; its forests will prove sources of wealth, and thousands of health and pleasure-seekers will build up summer resorts among its mountains. It is not rash to predict that the present population of 75,000 will rapidly increase, and, by the close of this century, will have become at least half a million.

CHAPTER XXXVIII.

NORTHERN IDAHO AND WASHINGTON.

Form of Idaho Territory—Lake Pend d'Oreille and its Forest—The Grain and Pasture Region of Northern Idaho and Eastern Washington—Other Arable Belts—The Big Bend and Yakima Country—Principal Towns—Western Washington—A Region of High Mountains, Dense Forests, and Deep Inlets of the Sea—Magnificent Snow Peaks—The Lumber Industry—Farming Districts in Narrow Valleys—Extensive Beds of Coal—Puget Sound Towns—The Columbia River Valley—Climatic Conditions.

THE shape of the Territory of Idaho resembles that of a leg of mutton, the shank being thrust up between the Territories of Montana and Washington, as far as the boundary of the British possessions. It is this shank in which the Northern Pacific Railway is interested. The road runs across it from east to west around Lake Pend d'Oreille. In the region seen from the track there is little of interest save to the lover of lake and mountain scenery, for the great forest described in the preceding chapter covers the surface of the country, and is not left behind until the plains of Eastern Washington are reached. South of the road, and on the boundary between Idaho and Washington, lies Lake Cœur d'Alène, rivaling in the beauty of its waters and the grandeur of its mountain surroundings Lake Pend d'Oreille; and further south, where the mountain range has a southeasterly curve, the forest disappears and there is a region of high, grassy plains, handsome to the eye, and responsive to culture. This region, identical in its character with that lying across the artificial boundary line separating Idaho from Washington, extends south to the Snake River, and up the Clearwater River from its junction with the Snake at Lewiston for a distance of about forty miles. The whole belt of fertile country immediately west of the mountains may roughly be described as having a length of 300 miles and an average breadth of sixty miles, and as lapping over into Idaho on the east, and reaching into Oregon at its southwestern end. It follows the direction of the Cœur d'Alène, Bitter Root and Blue Mountains, connecting ranges, in a broad, semicircular sweep. West of it lies a dry region of sage brush, bunch-grass, and dusty soil which does not receive sufficient rain-fall for the growth of crops, but is of considerable value for pasture. The moisture-laden air coming from the west is robbed of part of its burden by the high Cascade range. With what is left it appears to circle around the Blue Mountains and the Bitter Root and Cœur d'Alène chain as around the rim of a bowl, to refresh with showers the country lying near their feet. In all this fine agricultural region the annual rain-fall is theoretically too scanty for the successful growing of crops, being only fourteen inches, but most of it comes in the months when the farmer needs it. After the grain is nearly ripe there is no more rain until late in the fall. The face of the region we are describing is broken into countless hills and knolls, but their sides and summits are as fertile as the valleys between them; indeed, the farmers prefer the tops of the hills for their fields of wheat and flax. The streams run in deep creases from two to five hundred feet below the general level, bordered in places by buttresses of basaltic rock, and in others by steep grassy slopes, on which grows here and there a lonesome pine. Only on the slopes of the mountain ranges is timber found in a continuous forest growth.

A recent writer, speaking of the soil and climate of this region, says: " East of the Cascade Mountains the soil is a dark loam of great depth, composed of alluvial deposits and decomposed lava overlying a clay subsoil. This, in turn, rests upon a basaltic formation which is so far below the surface of the ground as to be visible only on the banks of the deep water-courses. The constituents of this soil adapt the land peculiarly to the production of wheat. All the mineral salts which are necessary to the perfect growth of this cereal are abundant, reproducing themselves constantly as the processes of gradual decomposition in this soil of volcanic origin proceed. The clods are easily broken by the plow, and the ground quickly crumbles on exposure to the atmosphere. Although the dry season continues for months, this light porous land retains and absorbs enough moisture from the atmosphere, after its particles have been partially disintegrated, to insure perfect growths and full harvests. This assertion is so at variance with common experience that it might well be questioned. Happily, it is susceptible of explanation. In spite of the fact that there is scarcely a shower between May and the following October, and that the average rain-fall for the year does not exceed twenty inches, there is always the requisite moisture for maturing the crops. Paradoxical as it may seem, if the rain were greatly in excess of this low average, damage would certainly ensue; and it is equally sure, if successful farming depended upon the limited rain-fall, there would be poor harvests. The clouds supply only in part the moisture which is needed. The warm air-currents, surcharged with vapor, which sweep inland from the ocean up the channel of the Columbia River, prevent drought. The effect of these atmospheric currents in tempering the climate has already been described. Their influence upon the vegetation is no less vital. The moisture with which they are laden is held in suspension during the day, diffused over the face of the country. At night it is condensed by the cooler temperature, and precipitated in the form of a fine mist on every exposed particle of surface which earth and plant present. The effect is that of a copious shower. This is apparent on taking a morning walk through the grass, which can only be done at the cost of wet feet. In this region it is no unusual phenomena for a smart shower to fall when clouds are invisible and the sun is shining. This occurrence is explained also upon the theory that the vapor in the atmosphere comes in contact with an upper current of cold air, which causes rapid condensation and consequent rain. A summer drought, therefore, which in most climates is a calamity, is here a benefit. The soil needs no more rains after those of the spring are over, and the farmer may depend upon cloudless skies at harvest time."

In Eastern Washington, by which term is designated all of the Territory lying east of the Cascade Mountains, there are other smaller arable belts besides this extensive one. The Big Bend country, inclosed on two sides by the Columbia, is a region nearly level, with fertile prairies alternating with streaks and patches of rocky or sandy ground and with occasional groves of pines. On the prairies the soil is good for the small grains, and the nutritious bunch-grass grows luxuriantly. North of this region lie the Colville and other fertile valleys, running up into a confused aggregation of mountains, which occupies the northern point of the Territory and joins the Cascades with the Rocky Mountains. West of the Columbia there is another fertile valley, that of the Yakima River, which, however, requires irrigation for the regular production of crops. This, too, is an open grass country, the timber beginning only on the first hills of the mountains.

Across Eastern Washington, from east to west, runs the Snake River, which, coming from the south, makes a right angle at Lewiston, where it receives the Clearwater. The main stream of the Columbia makes many bends, but has a general southerly course through Washington, until it receives the Snake, when it runs almost due west to the sea, furnishing for that part of its course the boundary line between Washington and Oregon. The other considerable rivers of Eastern Washington are the Palouse, a tributary of the Snake; the Yakima, the Spokane, the Weenatchee and the Okinakane, tributaries of the Columbia. The chief towns of the region are Walla Walla—the oldest and largest of them all and the first centre of wheat growing east of the Cascades; Dayton, Pataha, and Pomeroy, south of Snake River; Colfax, Spokane Falls, Cheney, and Sprague, north of the river. In North Idaho, which is geographically a unit with Washington, and which has long sought annexation to that Territory, the large towns are Lewiston and Moscow.

Turning now to Western Washington, we find a region totally different in its appearance from the eastern section of the Territory. Here there are no sunny, fertile plains. Dense forests of gigantic firs cover the face of the country. The blue salt waters of that superb inlet, Puget Sound, reach southward into the heart of the region for nearly two hundred miles. The lofty range of the Cascade Mountains is a barrier so rugged that it is crossed by few people besides Indians and trappers. All travel bound for Eastern Washington goes around by way of the Columbia River. The highest peaks of the range, Tacoma, Adams and Baker, rear dazzling summits of perpetual snow into the firmament. These magnificent peaks have an apparent altitude much greater than that of the highest Alps, from the fact that they are seen from the sea level towering above the forests and reflected on the calm waters of the Sound. A lower range, called the Olympic Mountains—the northern prolongation of the Coast Range, which runs through California and Oregon—divides the Sound Country from the sea-coast. The forests, which come down from the slopes of the Cascade Range, envelop all the bays, straits and havens of the Sound, and extend over the intervening range as far as the sea.

In Western Washington, the chief industry is lumbering. Here are found the largest saw-mills in the world, exporting their product to all the cities of the west coast of America, as far south as Valparaiso and also to Australia, China and Japan, and sending masts and spars to the shipyards of Europe. The slaughter of the forests along the Sound to supply these great mills with logs, has gone on now for more than a quarter of a century, but so dense is the growth of gigantic firs, that only the edge of the woods fronting upon the water has been notched here and there by the operations of the lumberman. Standing close by the water side, so that ships can load from their wharves, the saw-mills are each the centre of a village, the home of the mill-men and of the loggers, whose camps are in the woods near by. To the tourist sailing on the Sound the shores appear an unbroken wilderness, save where space has been cleared for a town or a logging camp. There are many farming districts, however, back of the thick green screen of the firs, where little rivers, flowing down from the melting snows on the high mountains, make narrow strips of alluvial bottoms, and in some places the tidal flats at the heads of bays have been redeemed by dikes and converted into valuable farms. Very little clearing has been done to obtain fields from the forests, but as the country becomes better settled and land more valuable, many tracts from which the larger trees have been cut by the lumbermen begin to be occupied by settlers, who use fire to aid the labors of the axe and saw.

The Puget Sound country has a second great natural source of wealth. Along the base of the Cascade Mountains extend large beds of coal, varying in quality from a soft brown lignite to a hard black bituminous, which cokes, and is therefore available for smelting iron. The coal is brought to tide water at Seattle and Tacoma by railroads leading up to the mines, and shipped to San Francisco and other points in steam colliers and sailing vessels. Although the yearly output is already considerable, the business must be regarded as only in its infancy. It is destined to grow steadily with the increase of population and the development of commerce and manufactures in the Pacific Coast communities, and to become a source of great and unfailing wealth. The researches made during the past year by the geologists of the Northern Transcontinental Survey show that the coal-field of Puget Sound is practically inexhaustible. Its importance as a factor in the development of the Pacific Coast can hardly be overestimated. Iron ore is also found upon the Sound, and a fair beginning has been made in smelting it at Port Townsend. The coast region of Washington, lying between the Olympic Mountains and the sea, resembles the Sound country in its general features, being forest-clad, and offering open lands for farming only near bays and rivers. Gray's Harbor and Shoalwater Bay afford havens for vessels of moderate draft. A sparse but steadily increasing population of farmers, woodsmen, and fishermen inhabits this region, and find a market for their products by shipping them to Astoria, at the mouth of the Columbia River.

The towns on Puget Sound are all prospering. Tacoma, the terminus of the Northern Pacific Railroad and the shipping port for the mines of Wilkeson and Carbonade, thirty miles distant, by the Cascade Branch Railroad, is a rapidly growing place, with 4,000 people, and good prospects of soon having ten times as many. Seattle, the commercial centre of the Middle and Lower Sound country, has 7,000 inhabitants, a railroad to the Newcastle coal field, a branch railroad connecting it directly with the Northern Pacific Cascade Branch, and indirectly with Portland and the East by way of Tacoma, and is the rival of that place for the position of future metropolis of the Sound. Olympia, at the head of the Sound, the Territorial Capital, is a handsome village of about 2,500 inhabitants, with a narrow gauge railroad connecting it with the Northern Pacific. Of about the same size is Port Townsend, at the entrance to the Sound, which is the Government port of entry and an outfitting place for ships. Other places of some importance are Steilacoom, Whatcom, Snohomish, and La Conner. Across the strait of Juan de Fuca, the broad entrance to the Sound, is the handsome little city of Victoria, capital of British Columbia, a place closely connected in its commercial relations with the Sound ports.

Along the Columbia River, on the Washington bank, the only towns are Vancouver, the headquarters of the military department, and Kalama, where the Northern Pacific Railroad leaves the river and turns northward to the Sound—the former having 1,200 inhabitants, and the latter 500. There are a few farms along the river bottom, and here and there, at long intervals, a saw-mill hamlet, or a salmon cannery, with its dependent village of fishermen. Lumbering and fishing are the chief occupations. The salmon fishery, of which more will be said in the chapter on Oregon, is carried on all along the river for a hundred miles above its mouth, but chiefly on the bar and on the waters of the wide estuary. The canneries are on both shores, but the business centres at Astoria, in Oregon, which is the shipping point. Of the average annual product probably one-half should be credited to Washington in any statement of her resources.

In respect to climate, Washington is divided into two distinct regions by the Cascade Mountains, differing widely from each other in mean temperature, average rain-fall, and in the general character of their seasons. Eastern Washington, although in the latitude of Lower Canada and Northern Maine, has the annual mean temperature of Pennsylvania and Ohio. It is subject, however, to greater extremes of temperature than those States. In winter there are short cold spells when the mercury drops to 20° or 30° below zero, but there is no long-continued period of great cold as in Dakota, for as soon as the wind blows from the west, the temperature rises rapidly. The springs are late and cold, and the summers are hot—a dry heat, not as much felt with the mercury at 105° as a temperature of 85° in most sea-coast regions. Evenings and mornings are cool in the hottest weather, and blankets are always needed at night. The autumn is the most agreeable season of the year. For the purposes of the farmer, however, the summers are admirable, for crops mature rapidly, and little rain falls later than the middle of June, so that the grain is harvested in good condition and threshed in the fields, where it lies in stacks until it is hauled to market.

In Western Washington the climate is so moist and mild that it can be compared to nothing on the Atlantic coast of the American continent, and finds its closest analogy in the South of Ireland. The warm vapor-laden winds blow against the high cold wall of the Cascade Mountains, and the moisture they carry is condensed into rain. In winter the Japan current so influences the temperature that snow rarely lies on the ground longer than a day or two. The winter is a rainy season. It begins late in October and ends about the first of May. During December, January, February and March, it rains more or less about two days in three. The other months of the rainy season are characterized by occasional showers, the midwinter rains being intermittent drizzles rather than a steady down-pouring. People go about without umbrellas, and insist that they prefer their wet season to the cold winters of the East. The summer climate is perfect—bright, clear, warm days, not too hot for comfort in outdoor life, and cool, refreshing nights.

Even from this brief sketch of Washington Territory the reader will readily conclude that here are the material resources for the building of a rich and populous State. The area of Washington is about one-half larger than that of Pennsylvania. Its length from east to west is 360 miles, its breadth 250 miles. With its great fertile interior plains, where the soil contains the best elements for the production of wheat, its immense forests, its inexhaustible beds of coal, its beautiful inland sea inviting the commerce of the world, and its temperate and healthful climate, its development, long retarded by its isolation, must be rapid now that it is joined to the railroad system of the East by the new northern transcontinental line. Next to Dakota it contains more unoccupied arable land than any of the new Territories of the West. Its varied resources and its advantages for commerce point to a diversified industry, which is the surest reliance for permanent prosperity. In many respects it resembles Pennsylvania, possessing, like that rich commonwealth, coal, iron, lumber, and excellent agricultural lands, and having ready access to the sea.

CHAPTER XXXIX.

OREGON.

Oregon not a New Community—A Large Part of its Surface still Unoccupied—The Donation Law—Beauty and Fertility of the Willamette Valley—An Agricultural Paradise—The Umpqua and Rogue River Valleys—Character of the Sea Coast Region—Coos and Yaquina Bays—Eastern Oregon—A High, Treeless, Bunch-Grass Plain—The Lake Country of Southern Oregon—The Umatilla Wheat Region—Grande Ronde and Wallowa Valleys—Other Arable Valleys—Wool Growing and Cattle Raising—Climatic Peculiarities—Valley of the Columbia—The Salmon Fishing and Canning Industries—Lumbering and Mining—Chief Towns—Oregon Scenery.

OREGON is not a new community, as the term is used in the West. It has had nearly forty years of growth since it began to attract agricultural settlement, and would therefore rank chronologically with Iowa and Wisconsin. Its great distance from the older portions of the country has retarded its development, however, and it cannot count more than 225,000 inhabitants to-day. Only a small part of its surface is occupied. The best land for farming cannot now be had by homestead claimants, for the rich valleys were long since settled, and a law of Congress called the Donation Act, passed to encourage emigrants to make the long journey across the continent, gave large holdings to individuals, and thus operated to prevent dense settlement. Under this law every married man could take up a claim of a mile square—just four times the amount of land allowed to homestead and preemption claimants in other States and Territories. These donation claims are still to a considerable extent in first hands, or remain undivided in the hands of heirs of the original settlers. As a rule but a small part of each is cultivated.

The Willamette Valley, in which is found more than one-half of the good arable land in the State, would support many times its present population; but new comers who wish to till its rich bottoms and uplands must persuade the old settlers to divide their farms and sell the acres they make no use of. This valley, so famous for its beauty and productiveness, lies between the Cascade Mountains and the Coast Range, and is about 150 miles long by forty wide. Its surface is undulating, and is well watered by numerous small streams fed by springs and melting snow in the mountains. The soil is so fertile that after a field of wheat is harvested a second crop will spring up from the grain dropped by the ripe ears, and if the field is not plowed, this "volunteer crop," as it is called, will often yield more bushels to the acre than the average product of wheat fields in the Eastern States. A richer valley, or a fairer one to look upon, can nowhere be found. Flourishing orchards alternate with broad fields of grain and belts of woodland and pastures, and lofty mountains frame the pleasant picture on either hand. The products of the valley are carried to market at Portland by four lines of railroad and a navigable river, and there they meet, at the head of tide water, the commerce of the world. A fruitful soil, a mild climate, lovely natural scenery, and excellent transportation facilities reaching the sea by a short journey, combine to make the Willamette Valley a veritable paradise for farmers if any such exists on earth. If there is any drawback it is the wet winter, which has given the name of "web-feet" to the inhabitants of Oregon; but the people who have had long experience of the climate would be sorry to exchange their mild and rainy winter months for the snow and severe cold of the same latitudes in the East.

We have spoken first of the Willamette Valley because it is the heart of the State. For a long time it included all there was of settled Oregon. It made Portland a city; it attracted commerce to the Columbia River; it colonized the newer portions of the Pacific Northwest. At its head the Coast and Cascade Mountains are joined by low cross ranges, and further south the water-courses run directly to the sea, making open valleys at first, which soon narrow into cañons. The first of these is the Umpqua River, along whose banks there is some good grain land and much hill pasture. Next is the Rogue River, which makes a very attractive valley about thirty miles long by twenty wide, enjoying the finest climate in Oregon, the rainy season being short, and most of the winter weather resembling that of the south of France. Beyond this fortunate valley rise the Siskyou Mountains, which form the southern boundary of the State.

The seacoast region of Oregon has a width, from the summits of the Coast Mountains to the Pacific, of about fifty miles, and is covered with forests save on the tidal flats around bays, and at the mouths of rivers, and on a few strips of prairie close to streams. Settlement here involves clearing, and the country is still nearly all a virgin wilderness. Cool summers and a great deal of fog and rain in the winters, are the characteristics of the climate. The settlers raise cattle, make butter and cheese, do a little farming, and ship some lumber. There is much rich land that will be extensively cleared for farms in the next generation, when there is no more prairie land in the United States to be had for the taking. Now the few occupants of the forest regions of both Oregon and Washington are content with small fields for grain and potatoes for their own use, and manage to live comfortably by keeping stock to run in the woods. There are two harbors on the Oregon coast besides the entrance to the Columbia—Coos Bay and Yaquina Bay—but both are too shallow to admit large vessels. The Government is now endeavoring to improve the entrance to the latter. At Coos Bay there are mines of lignite coal, not extensively worked, but making small shipments to San Francisco.

Eastern Oregon, under which term is included all of the State lying east of the Cascade Mountains, differs widely in its appearance and climate from the rest of the State. For the most part it is a high-rolling, bunch-grass country, destitute of trees, and too dry for cultivation. In the south, near the Nevada line, there are immense areas of sage-brush plains and considerable stretches of lava and alkali deserts. This unattractive region is relieved, however, from its sameness of desolation by two groups of lakes, which lie in grassy basins, where the business of stock-raising supports a small rural population and has developed a few little towns. Some notable exceptions must be made to this general description of Eastern Oregon as a dry and dusty plain, covered with a scanty vesture of bunch-grass, and producing no vegetable growth better than the despised sage brush. The great wheat belt of Eastern Washington and Northern Idaho, sweeping around at the base of the Blue Mountains, laps over into Oregon, in Umatilla County, for a distance of about fifty miles, and in this, its extreme western portion, has the same fertility and beauty which mark its whole surface. Then, south of the mountains and inclosed by their spurs, lies the fine agricultural valley of the Grande Ronde, having a length of thirty miles and a width of ten, and the smaller valley of Wallowa, which is too high for general farming purposes, but is an admirable grazing and dairy country. Further south, and near the Idaho line, the valleys of Burnt River, Powder River, and the Owyhee River are excellent for grazing, and offer considerable areas of irrigable land to agricultural settlement. Of similar character is the long valley of the John Day River, extending almost across the eastern portion of the State. The Des Chutes River, draining the eastern slope of the Cascade Mountains, is a clear rapid stream, and its valley and the adjacent region are valuable for stock-raising. Willow Creek, another tributary of the Columbia, has also a fertile valley. Apart from the Umatilla grain belt and the valleys named above, which altogether embrace scarcely a tenth part of the area of Eastern Oregon, this portion of the State cannot be said to be adapted for settlement save in a sparse and straggling way. Very little of the country is absolutely worthless, for the bunch-grass rarely fails; but a great many acres are required for pasture for each animal, and there must be water for stock ranges. Wool-growing and cattle-raising are already important industries, and are capable of considerable expansion, and more and more farming is done every year along the streams; but the population of the entire region can never be at all dense.

The climate of this region is colder in winter and warmer in summer than that of the Willamette Valley. Very little rain falls between the first of June and the first of October. In the winter there is a good deal of snow, which, however, does not lie long on the ground, being speedily melted by the warm Chinook winds. These winds break off the cold snaps suddenly, so that it is not usual for a low range of the thermometer to last longer than three or four days. The mean temperature for the year is about the same as that of Pennsylvania and Ohio, and the chief differences between the Eastern Oregon climate and that of those States are found in the dry atmosphere, the scanty summer rain-fall, and the short duration of cold spells in winter.

The Columbia River forms the northern boundary of Oregon for three-fourths of the State's breadth. The valley of this magnificent river adds very little, however, to the agricultural resources of the State. There is only a narrow strip of level land between the water and the mountains, and much of this is subject to an annual overflow. Here and there space is found for a few farms, but the general appearance of the banks is that of a wilderness of forests and mountains below the Cascade Range, and of basaltic cliffs and steep and lofty grassy hills above that range, save for a space of about fifty miles above Willow Creek, where level plains stretch out to the base of the Blue Mountains. The river and its shores afford other sources of wealth, however, than those of the farms redeemed from the dense woods on the bottoms, or perched on shelves at the feet of huge precipices of brown basaltic rock. Much lumber is cut from the forests and sawed at mills along the stream, where it is loaded upon sea-going ships. The swift waters yield an enormous catch of salmon. The firm, rosy flesh of this finest of all the food fishes is canned, and finds a market in all parts of the civilized globe. Oregon shares with Washington in the profitable industry of catching and canning salmon, the fishermen's villages and the canneries being established at numerous points on both sides of the Columbia, from the Lower Cascades to its mouth. Astoria, in Oregon, on a bay just inside the river's mouth, is the chief centre of the business. The town is quaintly built out over the tide from the foot of the hills, which descend in steep slopes to the bay. There was not room enough on the land for the town as it grew from its lowly condition of an Indian trading-post, so the people took to the water, putting their houses on piles and building bridges for their streets. Under dwellings, stores and streets can be heard the wash of the tidal waves against the piles. Here are many of the principal canneries, and here live most of the fishermen who go out to the bar in their little boats for the first chance at the salmon as they come into the river—

a perilous life, often cut short by a sudden gale, but a fascinating one, because of the varying luck and the chances of a heavy catch. The fish are brought to the canneries, where they are cleaned, cut up, and packed in tin cans, which are placed in boiling water long enough to cook the contents. The air-holes in the cans are then soldered, the labels put on, and the cans packed in cases that hold four dozen each. A moderate season's catch in the Columbia River is 300,000 cases of 48 pounds each, making the enormous quantity of nearly 15,000,000 pounds of fish. In spite of this great annual raid on the salmon of the Columbia there seems no falling off in the supply. Gill-net fishing is carried on from the river's mouth for a distance of about fifty miles, and further up there are a number of gigantic wheels supported on platforms built out from the banks, and kept in motion by the force of the current, which scoop up the fish and land them in tanks. Still further up, between the Cascades and the Dalles, the Indians fish with scoop nets.

The precious metals play an important part in the aggregate of Oregon's resources. In the southern part of the State a good deal of placer mining, by both hand-sluicing and hydraulic apparatus, is carried on, and there are a few paying quartz ledges; and there is another mining district in the southeastern part of the State, of which Baker City is the business centre. The industry has long passed the stage of exciting discoveries, "stampedes," and wild speculation, and has become a steady-going and moderately profitable business.

The chief town of Oregon, Portland, will be described in the ensuing chapter. Astoria, the sea-port and fishing mart, ranks in population with Salem, the pretty capital, in the Willamette Valley, each having about 7,000 inhabitants. Albany, Corvallis, McMinnville, and Eugene City, are important trading towns in the same valley. Oregon City is a milling village, using the water-power of the falls of the Willamette. Roseburg is the central town of the Umpqua Valley, and Jacksonville and Ashland divide the trade of the Rogue River Valley. East of the Cascade Mountains the principal town is the Dalles, on the Columbia. Smaller places of local consequence are Pendleton, Union, and Baker City.

There are few points of the American continent that can rival Oregon for grand and imposing scenery. The lofty peak of Mount Hood, like a magnified Egyptian pyramid, sheeted in snow, and set upon an immense green wall, is the most beautiful mountain of the whole Pacific coast, if symmetry of form be regarded as the first element in beauty, and in height and massiveness it is only surpassed by Mount Tacoma. The great Sugar Loaf of Mount St. Helens, though on the Washington side of the Columbia, belongs to the scenery of Oregon as well as to that of the neighboring Territory, and so does Mount Adams. All three of these glittering peaks, as well as the summit of Tacoma, far in the north, and of Jefferson on the southern horizon, can be seen from the hills back of Portland. The lower peaks and ranges of the Coast and Cascade Mountains, and of the Calapooia and Siskyon Mountains in Southern Oregon, present to the eye a thousand pleasing outlines.

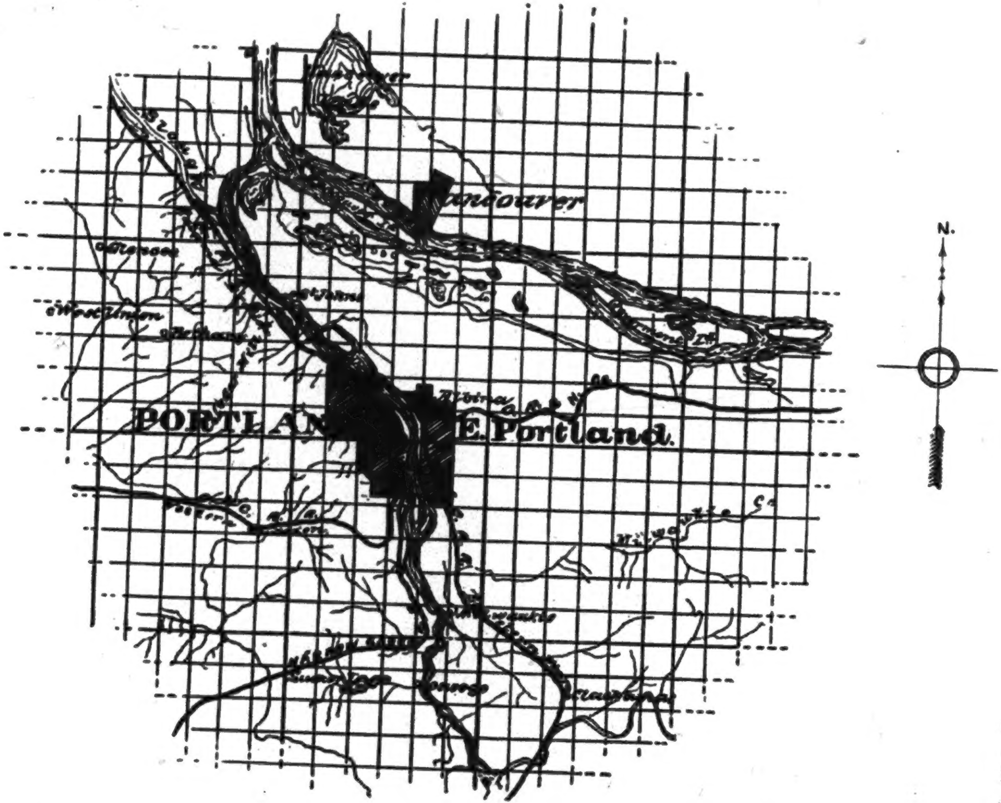
In the grandeur of its shores the Columbia ranks first of American rivers. Its current is as impetuous as that of the Mississippi, its mountain walls and palisades far loftier than those of the Hudson; cataracts like those of the Yosemite Valley dash over its basaltic cliffs. At the Dalles it buries itself in a profound crevice whose depth has never been fathomed, showing of its surface only as much as can be compassed by a stone's throw; at Astoria it becomes a broad tidal estuary, whose farther shores lie in dim distance; at the Cascades it is a foaming, head-long torrent; at the mouth of the Willamette it is a placid lake, encircling many green islands. The Willamette has an emerald green current, and flows between gentle slopes, through farms and woodland, past orchards and pretty villages—a placid and idyllic stream, save where it leaps down forty feet in one bound at its falls, and makes a small Niagara of white foam and rainbow-tinted spray. Indeed, to briefly catalogue half the special scenic features of Oregon would demand a great deal more space than this chapter affords. Enough to say that the State has all of the grandeur and loveliness in landscapes that mountains, rivers, valleys, waterfalls, lakes, and the ocean can give, and that tourists will find within its bounds, and those of its neighbor, Washington, a combination of Switzerland and Maine, of Italy and Norway.

CHAPTER XL.

PORTLAND AND THE PUGET SOUND PORTS.

The Metropolis of the Pacific Northwest—Portland's Advantageous Location—Its Enterprise in Establishing Transportation Lines—The Railway System Centring in Portland—A Well-built, Rich and Beautiful City—Its Great Staple Export of Wheat—The Columbia River Bar—Predictions of a Greater City on Puget Sound—Tacoma the Legal Terminus of the Northern Pacific Railroad—Its Tributary Coal-Fields and Lumber Interests—Wheat Shipments from Eastern Washington—Seattle's Activity and Growth—Its Important Trade with the Smaller Towns on Puget Sound.

So far ahead is Portland in population and business of all other towns in Oregon or Washington, that it claims, with good reason, the title of metropolis of the Pacific Northwest. In its early development it was wholly the product of the Willamette Valley. The town sprang up at the point where the grain-laden ox-wagons from the fertile valley met the clipper ship. This was not on the great river of the region, the Columbia, because ships could get nearest to the wheat-fields by turning out of that stream into the Willamette and following its placid tributary channel a few miles. For many years after the first settlement, the Willamette Valley was all there was of Oregon save forests and fur-trading stations. That valley offered open prairies to the plow, and thither the pioneers, crossing the arid plains by a journey longer in time than is now required to sail around the world, made their homes. When they had a surplus of grain to sell, they hauled it down to deep water and exchanged it for clothing and implements. So Portland arose, being both seaport and inland town—for it is nearly a


PORTLAN
E. Portland
ancouver
Albina
West Union
St. Johns
Milwaukie
N.

PORTLAND, OREGON.

hundred miles from the ocean, yet great ocean steamers and deep square-rigged ships lie at its wharves.

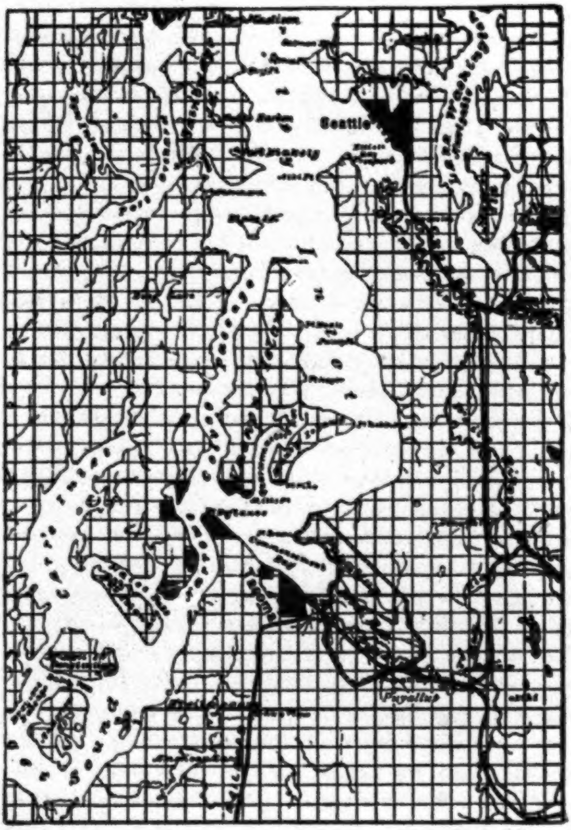
In course of time the important discovery was made that east of the Cascade Mountains lay a second grain region. An experiment in raising wheat for the needs of the military post at Walla Walla was so successful that farmers began to go into the country near the post, and in a few years they, too, had a surplus to send to the world's markets. They were far removed from the settlements in the Willamette Valley, and the transportation system of steamboats on the Willamette River, above and below its falls, was of no use to them. Geographically considered, this new agricultural district was not naturally tributary to Portland. A town to send its grain to sea and furnish it with supplies was expected to grow up on the Columbia. Some thought it would be at Vancouver, just above the mouth of the Willamette; some at St. Helen's, further down; some at Astoria, where the Columbia meets the sea. The enterprise of Portland, however, was thrown into the scale and outweighed all other influences. Her merchants put steamboats upon the Columbia, built railroads around the two obstacles to its navigation at the Cascades and the Dalles, and thus brought the trade of the new wheat region to their own wharves and warehouses, forcing it to turn aside from its straight path to the sea to pay them tribute. When this was done, the supremacy of the city was assured, and its growth has since kept steady pace with the development of the two rich agricultural sections which sustain its commerce. Railroads have been built on both sides of the Willamette Valley, and the basin of the Upper Columbia is also reached by the locomotive, so that the costly transfer of freight around the Dalles and the Cascades is no longer made. First a centre of sea and river navigation, Portland has become also a railroad centre. The map printed with this chapter will show how extensive is its railway system. The road entering it from the east is a link of the Northern Pacific main line which leads directly to St. Paul, and there connects with lines to all the cities of the Atlantic coast and the Mississippi Valley. This line also sends out branches which reach the farming, grazing and mining regions of Oregon and Washington lying between the Cascade Range and the Rocky Mountains. South from Portland two roads run up the Willamette Valley to form a junction, and thence to continue southward as a single line to the California boundary, where they are soon to be met by a branch of the Central Pacific, giving unbroken rail communication between Portland and San Francisco. There are also two narrow-gauge railroads, one not shown on the map, which connect with the main lines in the valley, and also with steamboats upon the Willamette River, affording convenient local outlets for grain shipments. West of Portland, the Northern Pacific main line runs down the Columbia forty miles, and then turns north to reach the ports of Puget Sound.

The system of water transportation is equally well developed. Large ocean steamships, equipped with all the appliances of comfort and safety in use on the vessels plying between New York and European ports, make tri-weekly trips between Portland and San Francisco. These vessels are owned by the Pacific Coast Steamship Company and the Oregon Railway and Navigation Company. To the latter corporation belongs the fleet of river steamboats running between Portland and the towns along the Columbia and Willamette rivers. The steamboats and barges on the Upper Columbia and the Snake River and numerous steam craft on Puget Sound are also the property of this enterprising Oregon corporation.

Thus admirably supplied with transportation facilities, both by rail and water, the growth and commercial importance of the Oregon metropolis is not to be wondered at. Visitors from the East are surprised, however, that at such a distance from older cities, and in such a condition of complete isolation from the railway system of the country, as it was until the completion of the Northern Pacific, it was able to adopt the ways and enjoy the refinements and comforts of a long-established civilization. There is nothing crude or new in the appearance of the place, and no feature of agreeable town life is wanting. The business structures are solid and handsome; the shops are filled with costly wares; there are numerous churches, a theatre, a club, a library; the largest buildings are the public school houses; the streets are shaded with maples; many of the dwellings are remarkable for their size and cost, and still more for their attractive lawns and gardens. In summer it is a town of verdure and bloom.

With its suburbs of East Portland and Albina, the place has now 30,000 inhabitants. In striking contrast with its busy streets, its wharves, steamboats, railway trains, and tall ships, is the near forest, which hugs it closely on all sides. One can stand in the primeval woods and look down on all this bustling activity of trade and pleasure. Here are the tall pines and the dark thicket—there the masts, the smoking chimneys, the dusty streets, and the pleasant gardens. Only as the town advances does the forest recede. This curious feature of Portland is owing to its situation among the rugged timber-clothed hills that skirt the Columbia. The Willamette breaks through them, but its broad, open valley does not reach to its confluence with the larger river. The fields which first created the town begin many miles away. In the immediate vicinity of the city the wilderness has hardly been disturbed.

Portland's chief article of export is wheat, of which it ships about 10,000,000 bushels annually, mainly to Liverpool. The barometer of its prosperity rises and falls with the wheat crop. When the crop is large times are good. There is never a failure of the crop, but the difference between a moderate yield and a heavy one is an affair of no small consequence in its effect on the yearly income of merchants and transportation lines. Next to wheat, in the trade reports, comes salmon, of which about 300,000 cases are canned every year upon the Columbia. Lumber, wool, and hides are the other leading articles in the export tables. So far as easy access to the sea is concerned, the city is by no means as favorably situated as the ports on Puget Sound. The bar at the mouth of the Columbia is an obstacle to navigation, though not a very serious one, for the large steamers running to San Francisco cross it regularly, and ships are towed over it every day. The few wrecks that have occurred upon it have, with scarcely an exception, been occasioned by carelessness. Still, the shifting channel must be carefully watched, and vessels must wait for high tide to get across the bar. At low stages of water in the river, troublesome sand bars are revealed between Portland and the sea, and ships take a part of their cargoes from lighters towed down to Astoria. From these facts it is often argued that a great city will eventually grow up on the deep waters of Puget Sound, to which the largest ships can sail, unimpeded, straight in from the sea, and that a rival will soon arise in that quarter to contest Portland's commercial supremacy in the Pacific settlement. Thus far no such rival has shown itself, and the probability of its appearance need not be discussed here. The Sound ports are ambitious towns just emerging from the village state, and no comparisons can justly be drawn between them and the city to which they are all in a measure tributary.


Seattle
Tacoma
Puyallup

PUGET SOUND PORTS AND THEIR RAILWAY CONNECTIONS.

Of these towns, only the two which serve as seaports for the Northern Pacific system need be described here. Their relations to the railroad and to each other are shown by the accompanying map. Tacoma is the legal terminus of both the main line and the Cascade Branch, but an extension has been built to Seattle, diverging from the Cascade Branch ten miles east of Tacoma. By this line the distance between the two towns is forty miles; by water it is only twenty-seven. Tacoma is purely the creation of the railroad. It was only a saw-mill hamlet before the road came, and after the line was opened from Kalama on the Columbia its growth was very slow. Indeed, its advance to the position of an important town only dates from 1882, when it received a great stimulus from the certainty that it had only a year to wait for the connection of the Northern Pacific track in Montana, which would unite the Sound with the Atlantic coast by unbroken rail connection. Tacoma has some notable advantages. The largest ships and steamers come to its wharves. The town site covers three benches of a high plateau that look out eastward over Commencement Bay and the valley of the Puyallup to the Cascade Mountains and the magnificent snow peak of Mount Tacoma, grandest of all American mountains save Mount St. Elias, in Alaska. The coal fields at the base of the mountains, now largely worked, are tributary to the town, and so is the rich valley of the Puyallup and numerous smaller valleys and prairies hidden in the midst of the dense fir forests that envelop the shores of the Sound. It has a considerable trade in lumber and coal, and confidently awaits the solution of the problem of cheap wheat transportation, in the belief that much of the grain of Oregon and Eastern Washington will seek the deep water of the Sound with the opening, this year, of unbroken rail communication, and that, as the point where the railroad first meets the ships on the Sound, it will command this important commerce. We may say further of Tacoma that it has already made some promising efforts at manufacturing, and that the beauty and healthfulness of its situation will soon attract tourists and summer residents. In a few years the great glaciers and snowfields of Mount Tacoma will be visited by thousands of travelers, who will find all the beauty and grandeur of the high Alps. The town will profit largely by this tide of travel, to which it must serve as base and rallying point.

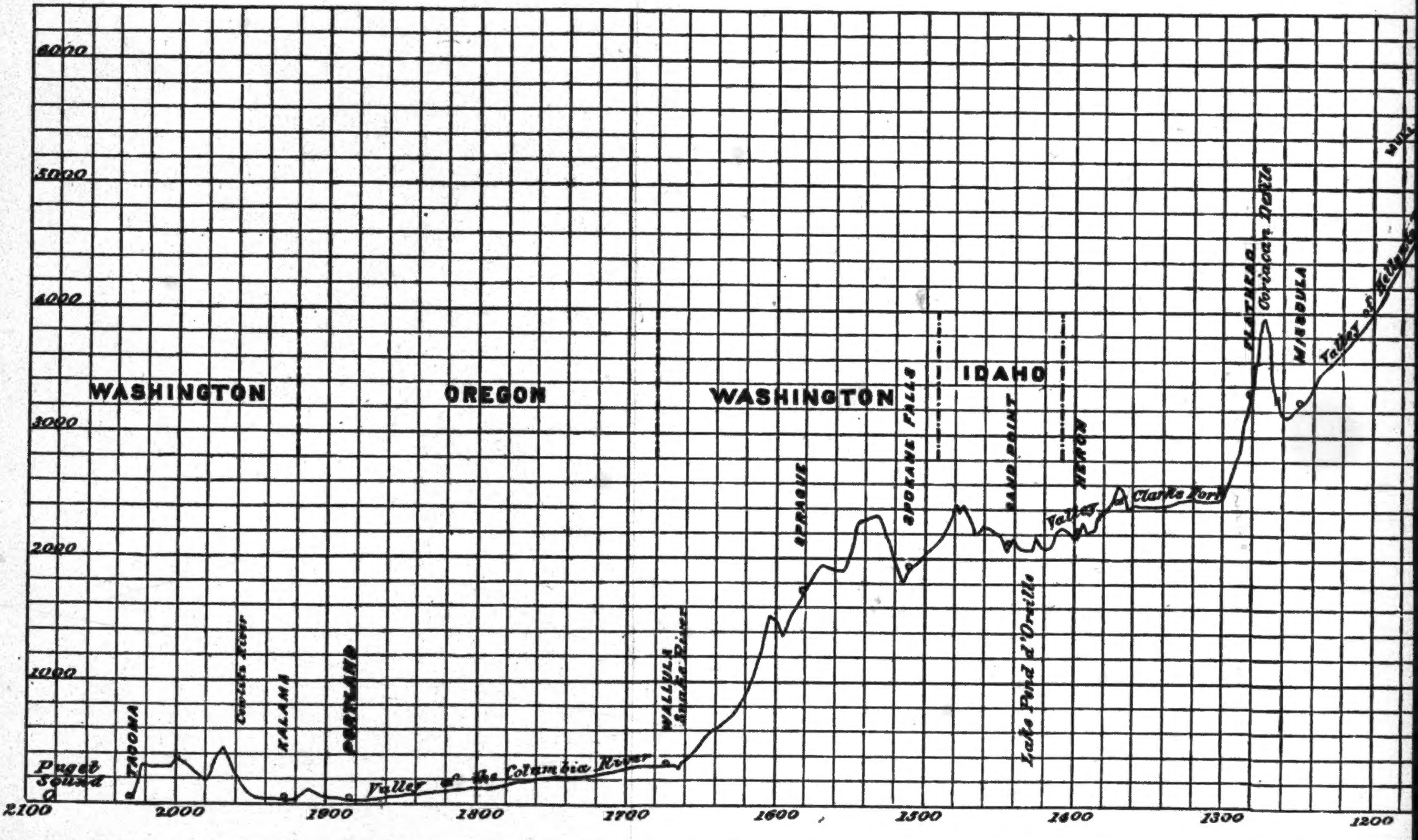
At this time (in the summer of 1883) the population of Tacoma is about 4,000 souls. That of its neighbor, Seattle, is probably not less than 7,000. Seattle is much the older town, It hoped to be the terminus of the Northern Pacific, and, disappointed in this, showed an enterprising spirit in running little steamers to the sawmills up and down the Sound, and up the rivers where there are agricultural valleys. Thus the town became a centre of trade and a distributing point for supplies, and managed to keep ahead of all rivals. It was greatly helped by the opening of the Newcastle coal field, about twenty miles distant; the building of a railroad to the mines; and of wharves on its water front for shipping the coal. Mines, railroad, wharves, and the handsome steam colliers that carry the coal to San Francisco, are all the property of the Oregon Improvement Company. Besides the railroad to Tacoma, mentioned in a preceding paragraph, Seattle has lately secured, by the subscription of $150,000 on the part of her citizens, the early building of a line by way of the coal fields of Green River to a connection with the Cascade Branch of the Northern Pacific. The town is built on the steep slopes of hills that half inclose a pretty bay into which flows the Dwamish River, and the little level ground occupied by the business streets was obtained at much labor by cutting down the hills and filling out into the bay. In spite of the precipitous slopes, however, an orderly street system has been obtained, and the town profits somewhat even by its disadvantage of being tipped up at a sharp angle, by showing itself at one view to all who approach by water, to say nothing of the magnificent outlook, from its terrace-like streets, over forests, bays and Sound to the rugged crests of the Olympic Mountains. Three miles distant is Lake Washington; a fine body of fresh water over twenty miles long. It lies so close to the Sound that the idea of connecting it with tide-water by a canal with locks for water-power as well as transportation, and for a repair station in fresh water for ships, has long been a favorite one, and has lately ripened into a business project. Seattle saws and manufactures lumber, repairs machinery, ships coal, carries on considerable wholesale trade, and is regarded by its citizens as destined to be the chief city of the North Pacific coast. Its claim to be looked upon as the future metropolis of Puget Sound is vigorously disputed by Tacoma, and both are somewhat troubled by the remote contingency that a greater than either may arise at some point far down the Sound, facing out upon the Strait of Juan de Fuca, and directly accessible to ships coming in under sail from the ocean, without the help of steam tugs. As yet, however, there is not even a beginning of a commercial town on the eastern shore of the Lower Sound, although the locality was pointed out by the distinguished chief engineer, W. Milnor Roberts, fourteen years ago, as peculiarly adapted for the site of a great city.

PART III.

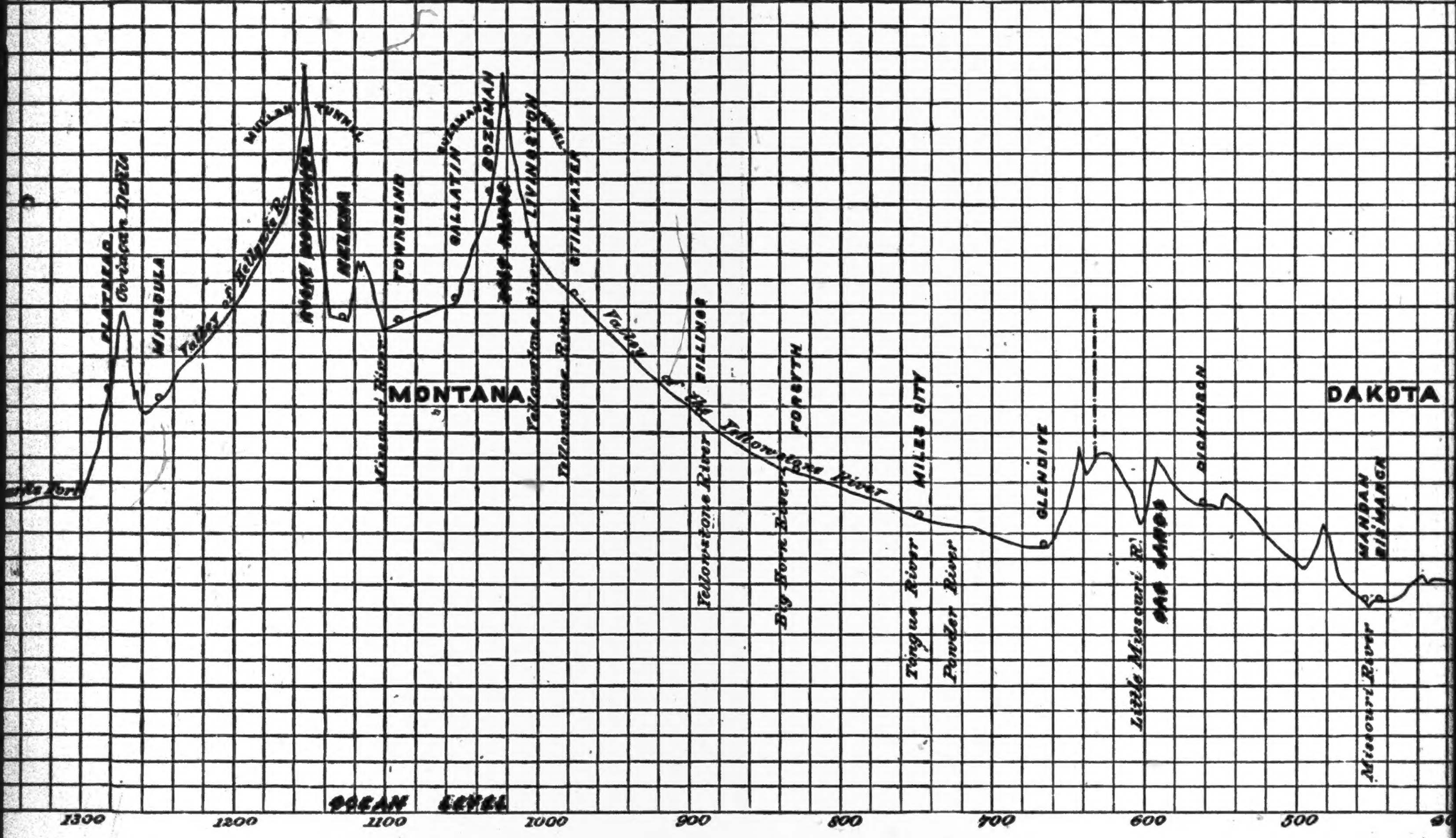
DESCRIPTION OF THE MAIN LINE.

WITH INCIDENTAL INFORMATION REGARDING ENGINEERING AND CONSTRUCTION.

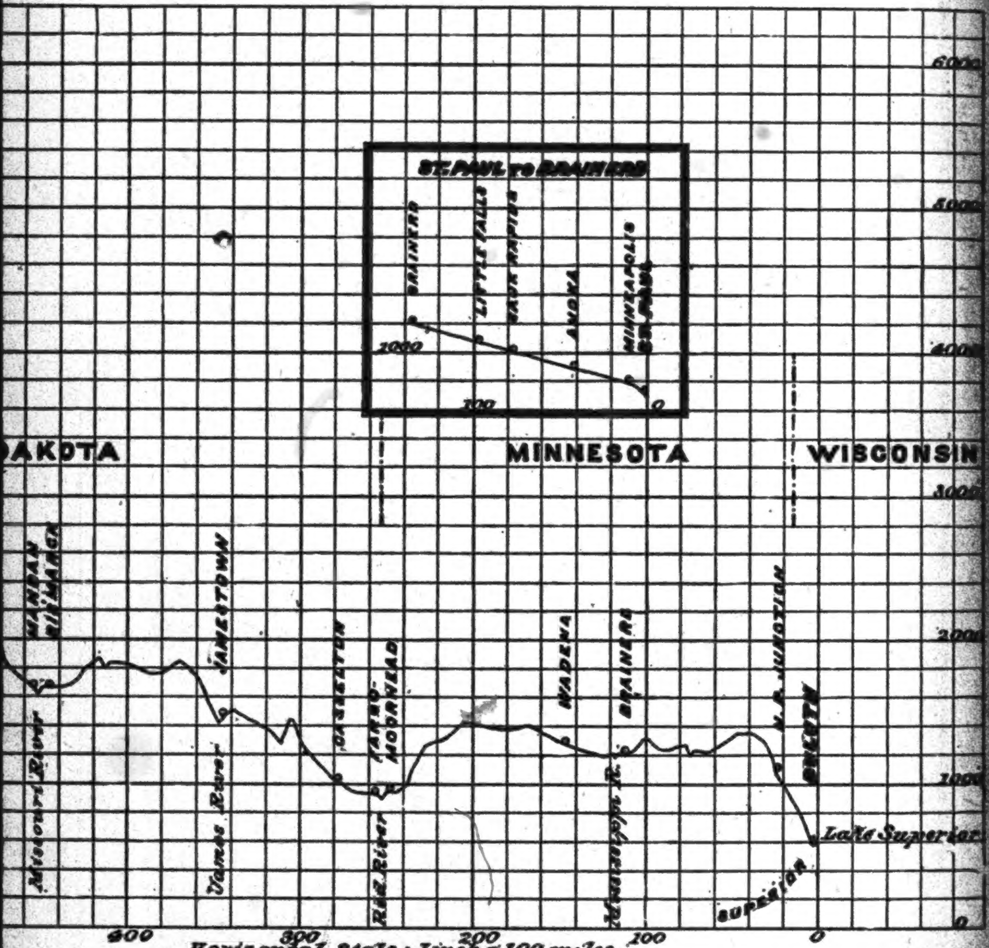
PROFILE OF THE NORTHERN PACIFIC RA



PACIFIC RAILROAD FROM ST. PAUL AND LAKE SUPERIOR TO PU



TO PUGET SOUND.



Horizontal Scale: 1 inch = 100 miles.
Vertical Scale: 1 inch = 1200 feet.

P. H. Del.

CHAPTER XLI.

THE MINNESOTA, WISCONSIN AND ST. PAUL DIVISIONS.

The East Minnesota Division—First Breaking of Ground on the Northern Pacific Line—A Celebration of the Event—Wheeling the First Load of Earth—Completion of the Road to Brainerd in 1870—Character of the Country Traversed—The St. Paul Division—The Wisconsin Division—The Brainerd Shops—The West Minnesota Division—Difficulties and Cost of Construction—The Red River Crossing.

THE East Minnesota Division of the Northern Pacific Railroad extends from Duluth, at the head of Lake Superior, to Brainerd, where it joins the St. Paul Division; the continuation of both lines westward being known as the West Minnesota Division. Its length is 114 miles. On this division occurred the first breaking of ground on the 15th of February, 1870. In the midst of the rigors of a northern winter, the scanty population of the two villages of Duluth and Superior City, at the head of Lake Superior, was notified by General Ira Spaulding, the engineer in charge, that ground would be broken next day at the Dalles of the St. Louis River, on the new Transcontinental Railroad. The point chosen was about a mile west of the present town of Northern Pacific Junction, where the St. Paul and Duluth Railroad joins the Northern Pacific. The news created much enthusiasm in the two hamlets by the frozen lake, and it was determined that such an important event should not take place without being worthily celebrated; so a large number of people drove out through the woods in sleighs, sleeping on the floor of a log-house at the Dalles, and appearing on the ground early next morning. There they found General Spaulding and W. H. Owen, of the

Northern Pacific Engineer Corps; W. W. Hungerford and two assistants, of the Engineer Corps of the Lake Superior and Mississippi Railroad, and a few workmen. In all, including the delegations from Superior, Duluth, and Fond du Lac, a village a few miles west of Superior, there were about seventy-five persons present. A fire of logs had been built the day before to melt the snow and thaw out the frozen earth. At noon the assemblage was called to order.

General Spaulding suggested that a committee of two citizens, one from Minnesota and one from Wisconsin, be appointed "to fill and deliver the first wheelbarrow of earth handled in the construction of the Northern Pacific Railroad." The president appointed J. B. Culver and Hiram Hayes, as the committee. Mr. Culver took a pick and shovel and filled the wheelbarrow, and Mr. Hayes wheeled the load a few steps and dumped it, amid continued cheering. The assemblage dispersed with cheer upon cheer for the friends, officers, and engineers of the Northern Pacific.

A large force was put to work clearing and grading in the following spring, and the line was opened to Brainerd in December of the same year. The Lake Superior and Mississippi Railroad was opened through from St. Paul to Lake Superior in the summer of 1870, and became the supply line for the transportation of construction materials for the Northern Pacific. The purchase of a half interest in its track east of the junction fixed Duluth as the lake terminus of the Northern Pacific line, and caused the remote and almost unknown hamlet bearing that name to develop, with great rapidity, into an active town. From Duluth the road skirts the Bay of Superior and the St. Louis River, which, near its mouth, widens out and is called Spirit Lake, for about twenty miles, much of the way in sight of the Dalles of the St. Louis—

a continuous rapid ten miles long, hemmed in in a wild, rocky gorge. There was heavy work all the way to the junction, cutting and filling in the precipitous hill sides and bridging the numerous ravines which come down to the river's edge. Five long trestles had to be erected, the highest 115 feet, besides a bridge across the river. The maximum grade on this section is seventy-four feet to the mile, and for eight miles west of Fond du Lac the average ascent is sixty-six feet to the mile; nearly the entire elevation from Lake Superior to the plateau which serves as a water-shed between its tributaries and those of the Mississippi having to be surmounted in that distance. West of the junction there is no grade heavier than fifty feet to the mile. The face of the country is slightly undulating, but there are no hills and no deep depressions. Numerous small lakes are seen from the track. A forest growth of pine, spruce, tamarack and birch covers the whole region, and there is much swampy ground. In crossing the swamps, which appear to cover the beds of old lakes, the engineers had a hard task to find a bottom sufficiently solid to support the road bed. The filling of one day would disappear during the night. In some places piles had to be used, and in the worst spot two tiers of piles were driven, one on top of another, before the hard clay was reached. For a short distance the road runs along the actual water-shed between Lake Superior and the Mississippi, and at Cromwell, 45 miles from Duluth, it crosses a small lake which sends a part of its overflow to the Gulf of Mexico and a part to the Gulf of St. Lawrence.

At Brainerd are established the most extensive shops to be found on the Northern Pacific road. These have been greatly enlarged and improved by the construction of handsome and substantial buildings during the present administration of the Company's affairs, and now fairly rank among the very best railway shops in the country. The principal structures consist of a machine shop, 120 by 250 feet; a blacksmith shop, 80 by 195 feet, with 52 fires; a round house, with 44 stalls for locomotives; a store room and office building, 40 by 300 feet; a laboratory, 20 by 30 feet; and an oil building, with a storage capacity of 110,000 gallons. These are all of yellow brick, with slate or sheet-iron roofs. For building and repairing cars, the wooden buildings of the old shops are temporarily used. In the Brainerd shops 722 men are employed in the locomotive department, and 344 in the car department. Three divisions of the Northern Pacific terminate at Brainerd, and the operating department of all of the main line and branches in the State of Minnesota has its headquarters here. Here, also, are the headquarters of the engineer's department for the entire road.

From Brainerd to Fargo, a distance of 138¼ miles, extends the West Minnesota Division. This portion of the main line was definitely located by the engineers during the summer of 1870, while construction was proceeding on the East Minnesota Division. Some minor changes were made in the location by order of the Board of Directors in January, 1871, on the recommendation of the chief engineer, and the contract for the work was let to the Northwestern Construction Company. Grading and track-laying began early in the spring, and the road advanced rapidly, reaching the Red River in the following December. The engineering questions related chiefly to the best locations for crossing the Mississippi and Crow Wing Rivers, and to plans for getting through the lake country by a line that should deviate as little as possible from the general direction of the road. There were no deep cuts or fills to make and few streams to cross. The road was costly in proportion to the present standards of construction charges, but it was built in a time of high prices, before the resumption of specie payments, and the lack of inhabitants in the region it traversed added considerably to the cost of labor, supplies and materials. There was much trouble regarding the acceptance of the road from the contractors. Finally there was a compromise in the spring of 1872, and the line to Fargo, which had been kept open during the winter by order of the Board to transport construction material for the extension into Dakota, was regularly opened to traffic.

The point for crossing the Red River was not finally determined until more than half the division had been built. It had been ordered by the Board of Directors the previous year that the crossing should be "at a point six miles north of the block store or warehouse owned by the Hudson Bay Company at Georgetown." This was about twenty miles north of the place afterward selected. The change was made in August, 1871, when President Smith, in company with other members of the Board, went to the Red River Valley and spent a week riding up and down the stream looking for the most feasible place combining the two features they desired to find—a favorable crossing and a good site for a town. They selected the site of the present town of Moorhead because the ground was higher there than at any other places on the river which they visited; but by so doing President Smith was compelled to give up a pet plan of making the longest railway tangent in America by building due west forty miles from Hawley. Two town sites were forthwith laid out at the crossing by the Lake Superior and Puget Sound Land Company, a corporation organized to manage all the town-sites on the whole line, and the names of two of the Northern Pacific directors, Mr. Moorhead and Mr. Fargo, were bestowed upon them.

The maximum grades on the West Minnesota Division are, going west, 50 feet to the mile, and, going east, 40 feet. The bridge across the Mississippi at Brainerd is a Post truss of three spans of 142 feet each, and one of 97 feet, extended at one end by a Howe truss of 60 feet; making the total length 683 feet. It is 60 feet above low water. Over the Crow Wing River, a stream almost as large as the Mississippi at its junction with that river below Brainerd, the track is carried on a Howe truss of three spans of 125 feet each. A new iron and wood bridge is now being built across the Red River. It rests on a solid masonry pier, which stands upon compound piles driven in 48 feet. The bridge carries a double track and has a draw 26 feet in the clear; the end rests being wrought-iron superstructure based on iron-jacketed piles.

THE ST. PAUL DIVISION.

The St. Paul Division, 136 miles in length, extends from St. Paul to Brainerd in a direction nearly due north, following closely the valley of the Mississippi River all the way. The only heavy grade encountered is in ascending from the river-side, following the course of Trout Brook. Here the ascent is ninety feet to the mile—a stiff pull, which requires an extra engine for all heavy trains. For the rest of the way the track of the division, running along the secondary bottom of the valley, has no noticeable grade. From St. Paul to Brainerd the whole rise is 500 feet, 200 of which are surmounted in the first five miles after leaving St. Paul.

THE WISCONSIN DIVISION.

The Wisconsin Division leaves the East Minnesota Division at Northern Pacific Junction, and, descending by easy and uniform grades of 50 feet to the mile, reaches the lake at the town of Superior, opposite the entrance to the bay of the same name. Here a large dock has been constructed for the transfer of freight from steam and sail vessels to cars. Just east of Superior the road crosses the Nemadji River by a drawbridge, and continues eastward to the Montreal River, the boundary between the State of Wisconsin and the upper peninsula of the State of Michigan. At the time this chapter is written only the 23½ miles of this division between the junction and Superior have been completed. The work was mainly done during the season of 1882, and the line opened in December last. Work on the remainder of the division is in progress. The line traverses a forest country for its entire length, where there are few settlements. For fifty miles east of Superior the country is somewhat hilly and difficult to build across—swamps, quagmires, and rocky ridges alternating; further east there is much level, sandy surface, moderately well timbered. The Wisconsin Division is a part of the main line of the Northern Pacific, the charter of the Company authorizing it to construct a railroad "beginning at a point on Lake Superior in the State of Minnesota or Wisconsin," which has been construed to mean that the road may be extended to the boundary between those States.

CHAPTER XLII.

THE DAKOTA AND MISSOURI DIVISIONS.

Work Begun on the Dakota Division in 1872—The Track Completed to Jamestown in 1872 and to Bismarck in 1873—Building Across an Uninhabited Region—The Road Reaches the Missouri River before the Panic of 1873—A Description of the Bismarck Bridge—The Missouri Division—Its Highest Summit 2,800 Feet Above the Sea—A Track Laid Across the Missouri River on the Ice—Character of the Work on the Division—The Bad Lands.

THE Dakota Division begins at Fargo and ends at Mandan, its length being 199¾ miles, and is practically a due east and west line, the termini being in precisely the same latitude, and the road diverging at no point more than six miles from a straight line drawn on a map from one to the other. The work of construction was begun in the spring of 1872, and the track reached Jamestown, 93½ miles, by the end of the working season. During the spring and summer of 1872 the road was built to Bismarck, a new town on the east bank of the Missouri River, which remained the western terminus until 1878. There were no engineering difficulties in building the division, but the contractors had the perplexities and delays to encounter inseparable from the task of pushing a railroad across vast stretches of prairie destitute of timber for bridges and ties, and wholly without population to furnish food and draught animals for the working forces. The construction parties were obliged to advance like an army across the desert, bringing all their materials and provisions over the road they were building from a base of supplies ever becoming more and more distant. There was not a solitary settlement between the Red River and the Missouri at the time, save those created by the advance of the Northern Pacific track. Construction was pushed with satisfactory rapidity, however, and had fortunately progressed as far as the Missouri River, a natural halting place, when the Company was overtaken by the financial crisis of 1873. At Bismarck there was river navigation, and the railroad opened a link in a line of transportation for the shipment of goods and supplies to the Government posts and the Indian agencies on the upper Missouri, and to the mining towns in remote Montana. Its business was too scanty, however, to pay for running trains over the Dakota Division the first winter after it was opened, and the second winter the division was only operated to Jamestown.

The maximum grade on the Dakota Division going west is 60 feet to the mile, and going east, 50 feet. The bridges over the Maple, the Sheyenne and the James Rivers are unimportant structures of a single span each, raised but a few feet above high water. There are no heavy cuts or fills, save at the approaches to the great bridge over the Missouri River at Bismarck. The whole line is economical to operate and maintain. The surface of the country traversed for the first forty miles west of Fargo is almost a dead level; then it becomes slightly undulating, the swells and ridges growing more and more perceptible as Jamestown is approached. A few miles west of Jamestown the road mounts to the Coteaux, a high table-land 1,850 feet above the level of the sea and 900 above the Red River at Fargo. Once on this broad table land the railroad grade follows the gentle undulations of the surface, and finally descends to the Missouri bottom along Apple Creek, the first running water encountered west of the Pipestone, a tributary of the James.

The original scheme of the Northern Pacific Railroad contemplated a bridge over the Missouri River near the town of Bismarck, but the Company was not in a financial condition to undertake the work until after the negotiation of its general mortgage bonds in 1880. The Missouri Division, from Mandan on the west bank of the river to the Yellowstone, was operated for two years in connection with the road east of the Missouri by means of a transfer boat which carried trains across, not without considerable difficulty in times of high water and floating ice. In the winter of 1880 George S. Morison, an eminent bridge engineer, was requested to examine the river at this point in conjunction with General A. Anderson, engineer-in-chief, and to prepare a report on the best method of crossing. In July, 1880, the preliminary examinations were completed, and the location of the bridge virtually fixed. The point selected was within two or three hundred feet of the line on which the proposed bridge has now been built; this location being determined as combining to the best advantage directness of route with a favorable bottom. The river at this point is about 2,800 feet wide, and the channel variable, about two-thirds of the whole width of the river being occupied, except at extreme high water, by sand-bars, as is always the case on the Missouri where the width between high-water banks exceeds 1,000 or 1,200 feet.

The report of July, 1880, proposed to cross the river with a bridge consisting of three spans of 400 feet each, resting on solid piers of granite masonry. A dike was to be built from the west shore to within 1,000 feet of the east shore, which is here a high bluff of extremely hard clay, thus confining the river within a width favorable to the maintenance of a fixed channel. The bridge was to be located about 500 feet below the dike, and, to provide for contingencies, was made 200 feet longer than the width of the confined river. This plan of operations was afterward carried out, and the completed work differs in no essential respect from the plans contemplated in the report of July, 1880.

The construction of the dike was begun in the fall of 1880. Unfortunately, while waiting for materials, the main navigable channel of the river moved over to the west shore, and when work was actually begun it was found necessary to leave this channel open for navigation. A wired willow mattress was built, however, on the proposed location of the dike, from the east side of the navigable channel to the point fixed for the west boundary of the corrected channel, leaving a space between the mattress and either shore.

On the 16th of December a vote was passed by the Board of Directors by which the immediate construction of the bridge was determined upon, and the work was placed in the hands of Mr. Morison. On the 7th of January H. W. Parkhurst, who had been appointed by Mr. Morison first assistant engineer, arrived at Bismarck and took charge of the work on the river.

Ground was broken for the bridge in May. The construction involved three totally different pieces of work—first, the control and rectification of the river; second, the bridge proper; third, the approaches.

The control and rectification of the river consisted in confining it to the 1,000 feet limit between the east shore and the end of the dike, and the protection of the east shore with rip-rap, so as to render it doubly secure from the eroding action of the water. The action of the dike has been such as to satisfy the engineers of the correctness of their plans. The river has been permanently confined to a width of 1,000 feet adjoining the east shore. A thick growth of willows has started spontaneously on the deposit formed by the river in what was formerly the main navigable channel adjoining the west shore.

The bridge proper consists of three through spans, each measuring 400 feet between centres of end pins, and two approach spans, each 113 feet. It is a high bridge, the bottom cord of the three main spans being placed fifty feet above the level of the highest summer flood, thus giving head room to pass steamboats at all navigable stages of the river. The head room above the extreme high water of 1881 is 42 feet; but this water was an exceptional result of an ice gorge, which necessarily put a stop to all navigation. Practically the bridge gives four feet more head room than many of the bridges on the lower river. The variable channel and the high bluff on the east side were alone sufficient reasons for adopting the high bridge plan in preference to a low bridge with a draw. The violent action of the ice and the excessive height of the ice floods were, however, the controlling elements in the selection of the high bridge plan. The east end of the east approach span is supported by a small abutment of granite masonry, founded on the natural ground of the bluff. The west end of the west approach span is supported by an iron bent resting on two Cushing cylinders, which are supported by piles driven into the sand-bar. The three long spans are supported on four granite piers. Pier 1, the easterly pier, rests on a concrete foundation, the base of which is twenty feet below ordinary low water and sixteen feet below the estimated extreme low water due to ice gorges. Piers 2 and 3, which are in the channel of the river, are founded on pneumatic caissons, sunk into the underlying clay to a depth of about fifty feet below ordinary low water and ten feet below the surface of the clay. Pier 4 is situated on the sand bar on the west side of the river below the protection of the dike, and rests on a foundation of 160 piles, which were driven with a Nasmyth steam hammer.

The approach spans are deck trusses of the fish-bellied or inverted bow string pattern, this form being adopted to keep away from the slope of the embankment. They are entirely of wrought iron, except the pins, which are of steel, and the wall plates, which are of cast iron. Each span contains 88,954 pounds of wrought iron, 2,825 pounds of steel, and 5,686 pounds of cast iron, the total weight being 97,465 pounds.

Each of the three main channel spans measures 400 feet from centre to centre of end pins, and is divided into sixteen panels of twenty-five feet each. The trusses are of the double system, Pratt or Whipple type, are fifty feet deep from centre to centre of chords, and spaced twenty-two feet apart between centres. The pedestals, the end posts, top chords, the ten centre panels of the bottom chord, and all the pins and expansion rollers are of steel. All other parts are of wrought iron, except the filling rings, wall plates, and ornamental work, which are of cast iron. Each span contains 600,950 pounds of wrought iron, 348,797 pounds of steel, and 25,777 pounds of cast iron, the total weight of each span being 975,524 pounds. The steel was manufactured in an open hearth furnace and under the most rigid inspection. It is of such a character that small sample bars were bent double and flattened back on themselves without any crack on the outside; one of the full-sized bars intended for the bridge when tested to breaking was stretched four feet in twenty-five before fracture took place. The long spans are proportioned to carry two seventy-five ton locomotives followed by a train of 30-foot cars, each loaded with twenty tons. With this assumed moving load the strains on the different parts of the structure are about ten to twenty per cent. less per square inch than the limits which good practice has sanctioned in many other bridges.

The east approach to the Bismarck bridge leaves the old main line at Bismarck station, and is exactly two miles long. It differs in no essential respect from other portions of the Northern Pacific Railroad through this section of the country, except that some heavy work and sharp curvature is encountered on the face of the bluffs adjoining the bridge. The west approach is 6,000 feet long from the west end of the permanent bridge to the old track on the low bottom land between the river and Mandan. This approach has a grade of one per cent. (52.8 feet per mile), descending westward. The eastern 1,500 feet of the western approach is built across the space reclaimed from the Missouri River by the action of the dike, which is now a sand-bar already covered with a fair growth of willows. This part of the approach consists of a timber trestle, the maximum height of which is about 60 feet. This trestle spans the main steamboat channel of 1880, which is now a willow swamp. To protect this trestle from destruction by ice, another large embankment has been built on the up-stream side of the trestle, which is 6 feet higher than the great flood of March 30th, 1881. This embankment stops the flow of ice carried over the top of the dike. The timber trestle is being filled in with earth, and the protection embankment is so located that it will form a portion of the final filling.

The bridge was formally opened on October 21st, 1882, and tested at first with four engines crossing from east to west, and then with eight crossing from west to east. A passenger train was then sent over from the Bismarck side. The event was celebrated by a banquet in Bismarck that evening. The Bismarck bridge and approaches form an integral part of the Northern Pacific Railroad, being the absolute property of the Northern Pacific Railroad

Company and being built under the general charter granted by the National Government to that Company. The total cost of the work was about $1,000,000.

From Mandan to Glendive, on the Yellowstone River, the main line of the Northern Pacific is called the Missouri Division. This division is 216 miles long, and, like the Dakota Division, keeps close to an east and west line. Its western terminus is only twelve miles north of the latitude of Mandan, and its extreme southern divergence from a straight line between the two points is only six miles. The valleys of the Heart River and its tributaries, the Sweetbrier, the Curlew and the Green, are followed pretty closely for about eighty miles, with occasional cuts across the plateaus between them. In the first thirty miles there is a gradual ascent of 400 feet, then a long downward slope, followed by another rise to the broad table lands which contain the sources of the Heart and the Knife Rivers. Here the elevation is 2,500 feet above the sea and 900 above the Missouri at Mandan. Then there is a dip of 200 feet into Green River valley, and beyond a long steady rise of 500 feet to Fryburg, the highest summit on the division, 2,800 feet above the sea level. From Fryburg there is a descent of 500 feet in ten miles to the Little Missouri River, which is crossed by a low truss of a single span. Beyond this stream the road steadily mounts for thirty miles with some minor dips, until, surmounting the heaviest grade on the division, at Beaver Hill (65 feet to the mile), it again attains nearly the same altitude as at Fryburg, and then descends 300 feet in twenty-eight miles and reaches the valley of the Yellowstone.

The building of the Missouri Division was begun early in 1878, by the transportation of ties, iron and other material in the dead of winter across the Missouri River on the ice. A track was laid upon the frozen surface of the stream under the direction of General Rosser, then the engineer in charge of construction, and for several weeks locomotives and cars were run from bank to bank, until the fires were actually put out on the engines by the water which covered the melting ice, and the hazardous passages were discontinued and the track removed a few days before the frozen bridge yielded to the rising current of the river. General Rosser's venturesome exploit attracted wide notice, and the Northern Pacific ice bridge was pictured in the illustrated papers. As soon as the spring flood had somewhat abated, connection was reopened between the two banks by means of a transfer steamboat carrying trains from shore to shore—a means of communication employed until the completion of the Bismarck bridge in October, 1882.

From Mandan to Fryburg, 136 miles, construction involved only light work, save for the numerous bridges across the Heart and its tributaries. The Heart is crossed four times in a distance of ten miles, and the little Sweetbrier, winding from side to side of its narrow valley, required numerous short pile bridges. Lately the expedient of making cut-offs for this stream has been resorted to, and several of the bridges have been replaced by embankments. From Fryburg to Beaver Creek the road traverses that singular region known as the Bad Lands, where the grotesque buttes of clay, baked into terra-cotta by subterranean fires of lignite, forced the engineers to make numerous curves, and in some places to effect deep cuts through the soft, brick-like substance. For several miles the track is ballasted with the red fragments from these cuts. The road made slow progress through the Bad Lands. Up to this region the track had been built across a level or slightly rolling country, destitute of timber after leaving the forests of Minnesota, and offering no obstacles to rapid and continuous work.

Now, however, there were huge buttes to cut through, deep ravines to fill, and trestles to build, and the difficulty of the task was increased by the great distance from the nearest base of supplies, and by the frequent presence of hostile Indians in the vicinity. Once beyond the Bad Lands belt—there about thirty miles wide—a fine rolling prairie was crossed, and thence the valley of Glendive creek afforded an easy route down to the Yellowstone.

CHAPTER XLIII.

THE YELLOWSTONE AND MONTANA DIVISIONS.

Up the Yellowstone Valley—A Difficult Line to Build—The Unstable, Crumbling Bluffs Undermined by the Action of the River—Dikes and Wing Dams Constructed—34 Miles of Rock-cutting—Long Tangents and Easy Grades—Completion of the Yellowstone Division in 1882—The Montana Division—The Yellowstone Bridges—Crossing the Belt Mountains—The Bozeman Pass and Tunnel—Difficulties Overcome in Constructing the Tunnel—Sluicing out the Eastern Approach—Early Surveys—Johnson's and Roberts' Routes—The Descent of the Pass—The Gallatin Valley and the Upper Cañon of the Missouri—Progress and Completion of the Division—The National Park Branch.

FROM Glendive, the railroad follows the course of the Yellowstone for 340 miles to Livingston. The portion of the road between Glendive and Billings, 225 miles, constitutes the Yellowstone Division. Although a valley line, this division was by no means an easy or inexpensive one to build. The valley of the Yellowstone is a narrow one, varying in width from five to ten miles, and along its whole length it is hemmed in by lines of high, precipitous bluffs of an average height of 150 feet. Winding from side to side of the level bottom land between these massive walls, the powerful stream washes the base of the bluff on one side or the other. One of two plans had to be followed by the railroad engineers: either to bridge the river at every sharp bend in its course, or to follow one bank and cut a roadway through the rocky precipices wherever they are closely hugged by the stream. The latter course was adopted from Glendive to Billings, and the south bank selected for the route. The problems of construction were rendered far more difficult than was apparent at first sight, formidable as seemed the work of carving a road-bed out of the face of lofty precipices, by the peculiar character of the rock composing the bluffs. This is of so porous and unstable a nature that it disintegrates under the action of the weather, so that the roadway once cut out was constantly being obstructed by slides of rock and earth coming down from the slopes. To make matters worse, while the cliffs were sending down great masses of crumbling material to obliterate the track, the river was steadily undermining the road bed. These serious difficulties encountered at several points, and in some places for a distance of three or four miles in continuous length, were finally mastered by filling in on the river side with material taken from the cliffs, thus giving them more slope, removing the track out a few yards from their base, and protecting the embankments where washed by the river by rip-rap work. The riprapping did not, however, answer in places where the current struck the bank with considerable force, and it was found necessary to turn the channel away from the shore by dikes thrown across to islands or by wing dams built out into the stream. These constructions are composed of willow fascines, twelve feet long, laid in a double tier, at an angle of 33 degrees with the course of the dike, each layer crossing the one below. The large ends of the fascines are placed down stream so as to give a slope to the top of the dam. Over each course stakes are driven down five feet, and the tops bound together with half-inch rope. Then 18 inches of gravel is put on and worked down into the brush to make a solid wall, before the second course of fascines is added. When the dike is of sufficient height it is covered with heavy rocks. The silt from the river fills up the interstices in the fascines and a growth of willow soon covers the dike. The most important of these constructions are Eagle dike, which is 400 feet long, and Iron Bluff dike 1200, each reaching out to an island. These works have caused the main channel of the river to shift to the north side of the islands. For the wing dams, fascine work has been used at some places, and at others cribs of logs filled in with stone have been found successful.

There are in all on the Yellowstone Division 34 miles of rock cutting along the face of the bluffs, the longest continuous stretch being that at Myers Bluffs, 156 miles from Glendive, which is seven miles in length. As the valley is ascended, the rock becomes harder, and the difficulty on account of slides diminishes. The most troublesome point in this respect was found to be Iron Bluff, ten miles from Glendive, where the cliffs are a conglomerate of soft sand-stone and soapy clay, with little consistency, and display a troublesome tendency to slide into the river. A solid and safe road-bed was finally secured at this place.

To compensate for the costly and troublesome bluff cutting, the railroad, where it finds the bottom land on its own side of the river, has many long tangents, nearly level, without fills or cuts, and involving little more labor to build than throwing up enough earth with scrapers for a road-bed. One of these level stretches is 16 miles long, another 13, a number 5 to 8 miles.

The maximum grade on this division is 53 feet to the mile, at Iron Bluff, but this is only for half a mile each way. On all the rest of the division there is no grade exceeding 26 feet to the mile. The most important bridges are those over the Powder River, between Morgan and Terry Stations, the Tongue River at Miles City, the Big Horn River, near Custer, and the Yellowstone, two miles below Billings. These are all timber truss structures resting on piers formed of piles and cribbing filled in with rock, and will in time be replaced by stone piers and iron bridges. The longest is the Powder River bridge, which has 600 feet of Howe truss in four spans, and a pile approach of 300 feet. The Big Horn and Yellowstone bridges—the latter known as the first crossing of the Yellowstone—each consists of three spans of 150 feet.

The first tunnel west of Lake Superior is through a bluff about two miles beyond the Big Horn bridge. It is 1,070 feet long, and runs through clay, earth and porous sand-rock, and is timbered for its entire length.

Work on the Yellowstone Division began at Glendive in the spring of 1881. The track reached Miles City, 78 miles, in December, and a few miles of grading were completed beyond. During the spring and summer of 1882 the division was completed, the track reaching Billings August 22d.

The Montana Division, extending from Billings to Helena, a distance of 239 miles, has the general characteristics of the Yellowstone Division, as far as Livingston, 115 miles, in so far as it follows the valley of the river. The work is lighter, however, there being comparatively little bluff-cutting and that of a more manageable character, the stone being so hard that the slopes do not crumble. Much the greater part of the line runs across the long level stretches of the second bench above the river. There is no grade heavier than the very easy one of 26 feet as far west as the head of the valley. Near Stillwater, and at a point 37 miles west of Billings, the road crosses to the south bank of the Yellowstone by a truss bridge of three spans of 150 feet each and one of 100 feet, resting upon plank and pile cribs filled with stone. At Livingston the river is crossed again by a bridge of similar construction, having two spans of 150 feet each, with a piling approach over a branch of the stream.

At Livingston, where the repair shops of the division are established, the character of the road changes at once. Here the river comes out of the lofty snow-covered mountains which surround the National Park, flowing through deep cañons. Its course up to this point is north, but at Livingston it turns to the east and develops the beautiful valley which admirably serves as the route of the railroad for 340 miles to Glendive. West of Livingston rises the high ridge of the Belt or Bridger range, which separates the waters of the upper Yellowstone from those of the three rivers forming the upper Missouri. Here the Northern Pacific encounters its first mountain barrier. Fortunately, nature made a depression in this range, known as the Bozeman Pass, from the summit of which small streams flow in both directions, affording convenient approaches for a railroad. The charter of the Company provides that no grades shall be used steeper than the maximum grades on the Baltimore and Ohio Railroad, which are 116 feet to the mile. That figure was therefore adopted for the ascent and descent of the Belt range. It was not sufficient, however, to carry the road over the pass, and a tunnel of 3,610 feet in length was required. Work on the tunnel began February 11, 1882, almost simultaneously with the work on the commencement of the Montana Division at Billings. To avoid delay in track-laying beyond the divide, a high grade line two and one-half miles in length was built over the crest of the ridge in the winter of 1882–3, with grades of 220 feet to the mile, and by this means the road was pushed forward west of the tunnel without interruption.

The elevation of the summit in the Bozeman Tunnel above the sea level is 5,565 feet, which is 17 feet higher than that of the Mullan Tunnel through the main divide of the Rocky Mountains west of Helena, described in the following chapter. The highest point in the Bozeman Pass is 5,813 feet above the sea, and 256 feet above the grade of the tunnel, and the lowest point in the pass is the grade of the temporary road, which is 5,714 feet. Within the tunnel the grade is 53 feet to the mile to the summit, from whence it is only five feet to the mile to the western portal, where the standard mountain grade of 116 feet is resumed.

The tunnel is 20 feet high in the clear and 16 feet wide. The total ascent from Livingston to its eastern portal, a distance of 12 miles, is 1,052 feet. On the other side the ascent from Bozeman to its western portal, a distance of 11½ miles, is 812 feet. Unexpected difficulties were experienced by the engineers in opening the eastern approach of the tunnel. The mountain side is composed of sticky blue clay, saturated with the water of numerous springs, and as fast as excavations were made they were filled up by slides. During the month of March the contractors were able to handle only 2,000 cubic yards of earth. On the 4th of July a large slide occurred, which filled up a considerable part of the cut made by more than four months of labor with a force of men as great as could be used effectively. Everybody was discouraged. There seemed to be no way of overcoming the difficulty by the usual methods of railway construction. As fa[illegible] as the mushy clay was taken out of the cut the sides would cave in, or rather run in. In this emergency Mr. Sloan, County Treasurer of Gallatin County, suggested to the division engineer, J. T. Dodge, the plan of resorting to hydraulics. It was immediately adopted. A ditch and sluiceway were constructed from Middle Creek, on the western slope of the mountain range, and carried over the divide to the tunnel approach—a distance of three miles. By this means 250 miners' inches of water were obtained, and with the usual hose and nozzle employed in hydraulic mining, ground-sluicing was begun on August 10th, 1882. The experiment—a novel one in railway construction—was entirely successful. In the first twelve days 8,720 cubic yards of earth were washed out. When slides occurred they were no longer serious obstacles to progress, but were sluiced out in a few hours time. On September 24th the cut was completely washed out, and the rock work began the next day. On October 28th the portal of the tunnel was opened. The cost of removing the earth, which had been ninety cents per cubic yard, was reduced to eight cents. The greatest depth of the cut is 63 feet, and its length 601 feet. It is approached by an embankment 50 feet high and 1,300 feet long.

Work on the western approach began April 20th, 1882. Here there was no trouble at first. The length of the cut is 690 feet, and its greatest depth 57. The surface rock was reached in June, and the tunnel proper begun September 1st. The rock throughout the tunnel is a fine blue sandstone. At the east end it is quite solid, and only 50 feet of timbering are required; but at the western end it is broken up with seams, and timbering is required for nearly a thousand feet of the way to the centre. After the western heading was in 437 feet, the roof caved in, bringing down all the rock and earth from the surface of the ground 47 feet above, and it was necessary to make a new tunnel through the fallen mass. Happily nobody was injured by the mishap. The tunnel is not completed at the time of the publication of this book, but is expected to be finished by the close of the current year.

The Bozeman Pass was selected for the crossing-place of the Belt range only after careful surveys had been made of all other passes that offered the least encouragement to the eye of the skilful engineer. The line first contemplated by Edwin F. Johnson, the first chief engineer of the Northern Pacific Company, left the Yellowstone at a point near the mouth of the Big Horn, and crossed a divide in the Bull Mountains to the Musselshell. One plan was to go down Smith's River to the Missouri, and thence to Helena by way of the Gate of the Mountains; another, and a more feasible one, to follow the head-waters of the Musselshell up into the Belt range, and come down to the Missouri Valley by a pass at the head of Sixteen-Mile Creek. This latter route was surveyed, after W. Milnor Roberts became chief engineer, by engineers Hayden and Muhlenberg. It offered the advantage of a pass requiring no tunnel, but it had one more summit to cross than the route up the Yellowstone to the Bozeman Pass, and was also considerably longer. Mr. Roberts' line over the Bozeman Pass was run with the primary object of obtaining a grade of only 60 feet to the mile. To this end the line was carried higher up on the side of the narrow valley leading to the pass than the one subsequently adopted when construction began. It crossed the numerous gulches and lateral valleys, and would have required a great deal of filling and trestlework. A short tunnel was contemplated at the pass. The Roberts line was four miles longer than the actual line, and would probably have cost a million dollars more to build. Before construction work began on the road over the pass, engineer Beckler ran a line up Shield's River from the Yellowstone and across to the Missouri by the Sixteen-Mile Creek Pass. This pass was found to be 300 feet lower than the Bozeman Pass, and it could be surmounted by a short open cut, but the route was 40 miles longer than the one adopted.

The descent from the Bozeman Tunnel down Rocky Cañon is effected without sharp curves and with but a small amount of rock excavation on the steep hill-sides. A level stretch of thirty miles of track down the valley of the West Gallatin follows. The stream and its neighbor, the East Gallatin, are crossed by low pile bridges, as is also the Missouri a few miles above the point where the two Gallatins, Madison and Jefferson unite to form it. The general direction of the road is now nearly northward. Below the Three Forks it enters the Upper Cañon of the Missouri; a magnificent gorge, where the river runs with swift current between lofty walls of rock tinged with purple, green and yellow hues by metallic deposits, and worn by the elements into picturesque crags and buttresses, and the semblance of mighty walls of masonry. In many places the road-bed is cut out of the precipitous cliffs; in others it finds room on strips of bottom-land at their feet. The grade follows the stream closely, and its descent is about that of the river. The rock work was not difficult in the cañon, being, for the most part, easily excavated with pick and shovel without blasts. At its northern limit, about twenty miles from the Three Forks, the cañon is succeeded by a fine arable valley about fifty miles long by from five to ten wide, as inviting to the railroad engineer as a Dakota prairie. About midway in the valley's length the road crosses the Missouri on a temporary pile bridge, soon to be replaced by an iron structure, and, bending to the northwest, goes over a low summit between Beaver Creek and Prickly Pear Creek with a grade of fifty-two feet to the mile, and then across the valley of the latter stream to Helena.

Track-laying on the Montana Division was pushed forward during the entire winter of 1882–3, save when interrupted by short spells of extremely cold weather. In laying the temporary track over the Bozeman Pass the laborers were sometimes obliged to shovel the snow from the ground to go on with the work on the grade. The track reached the town of Bozeman on the 14th of March, a week earlier than the citizens had anticipated. On the

21st the arrival of the first passenger train was celebrated by cannon-firing, speeches, a procession and a banquet. Many of the inhabitants of the Gallatin Valley had never seen a railroad train before. In June the division was completed to Helena, and the event was commemorated by public rejoicing on the Fourth of July.

At Livingston the main line of the Northern Pacific approaches within fifty-four miles of the National Park—that region of natural wonders lying high up among. mountain summits on the water-shed of the continent, where rise the streams that feed the Missouri, the Columbia and the Colorado. The wisdom of making this marvelous domain, set apart as an immense park and pleasure ground by Congress, accessible to tourists by rail, early occurred to the Northern Pacific managers. In the summer of 1883 a branch road was built by the Oregon and Transcontinental Company, which, beginning at Livingston, follows the Yellowstone River through the Lower Cañon to the northern boundary of the Park, ending at a point near the Mammoth Hot Springs. Permission to carry the road forward to some central place in the Park was refused by the Government. The construction of the line was not difficult, save for some pretty heavy rock-cutting at narrow places in the cañon. Grading was begun in April, 1883, and track-laying completed in August.

CHAPTER XLIV.

THE ROCKY MOUNTAIN AND PEND D'OREILLE DIVISIONS.

Across the Main Divide—Fifteen Passes Surveyed—Why the Mullan Pass was Selected—A Description of the Mullan Tunnel—Unexpected Difficulties Encountered—Only Six Miles of Heavy Grades—Contrast between the Eastern and Western Slopes—Pend d'Oreille Division—Easy Grades and Long Tangents—The Snake River Bridge and the long Pile Bridges across Lake Pend d'Oreille—The Line along the Clark's Fork River—Serious Obstacles to Construction—Dense Forests, Precipitous Mountains, Deep Cañons, and Clay Slides—A Wild and Rugged Region—Enormous Powder Blasts—A Phenomenal Slide of Forty Acres—The Coriacan Defile—The O'Keefe and Marent Gulch Trestles—Valley of the Hell Gate River.

THE Rocky Mountain Division extends from Helena to Heron, a distance of 274 miles, and, like the Montana and Yellowstone Divisions, lies wholly within the Territory of Montana. Much engineering skill and research were expended upon the survey and definite location of this portion of the Northern Pacific line. Having once attained the valley of the Upper Missouri by a short line over the Bozeman Pass, the question was, how best to carry the road over the main divide of the Rocky Mountains so as to reach the Pacific slope. The preliminary surveys in 1871 and 1872 disclosed no fewer than fifteen passes through which it was practicable to build a railroad, but these varied greatly in elevation and facility of approach, and the range of choice was finally narrowed down to three, the Mullan, the Little Pipestone, and the Deer Lodge. The Mullan Pass required a long tunnel, but it gave the shortest line; the Pipestone would have thrown the road around by the important silver and copper mining centre of Butte, but its summit was the highest of the three, and its approach grades would have been the worst; and it was further objectionable on the score of the length of road required to reach it. This latter objection lay against the Deer Lodge Pass, which was of easy approach and required no tunnel, but which made a line forty miles longer than by way of the Mullan Pass. Chief Engineer Roberts adopted the Deer Lodge Pass, in spite of the long detour it demanded; but after he left the service of the Company his successor, General Adna Anderson, changed the location to the Mullan Pass. The new location was adopted by the Board of Directors in 1881, but was not formally approved by the Interior Department at Washington until May, 1883.

Construction work on the Rocky Mountain Division began at the Mullan Tunnel December 14, 1881. The approach to the tunnel from the east is by way of a high trestle carried over a ravine, and by an embankment seventy feet high at its highest point resting against a steep mountain slope for its entire length. In order to open the east heading on the precipitous incline of the ridge to be pierced it was only necessary to throw down a little earth and loose rock, and the face of the granite was exposed to the operation of the drills. The high embankment was made with the material taken out of the tunnel. The western approach was much more difficult, a cut having to be excavated through earth and loose boulders to a depth, where it reached the tunnel portal, of fifty feet. The heading at this end was not opened until October 21, 1882. To facilitate the work a shaft was sunk which struck the tunnel level 700 feet from the west portal at a depth of 129 feet. This was begun May 5, 1882, and reached the proper depth July 29, 1882. The west drift from the shaft met the western heading December 31, 1882.

It was supposed by the engineers and the contractors that solid rock would be found all the way through the mountain, but they were greatly disappointed. The rock is granite, but a limestone formation lies only a few rods away, and the interior of the mountain plainly shows evidence of a grinding motion which has broken the strata and in places produced seams of pulverized granite somewhat resembling blue clay. The faces of the rock on each side of these streaks are worn smooth, as though they had been polished by a lapidary's wheel. Seams of pure quartz are also found, and pockets lined with infiltrated crystals traceable to the adjoining limestone formation. After the tunnel had been driven 700 feet from the east portal, the rock became so treacherous that it was necessary to timber the roof and sides. This was done with pine and fir from the neighboring mountain sides, the upright post and arch pieces being twelve by twelve inches, and the "lagging" forming the sides and roof being of saplings hewn to the dimensions of four by four inches.

After 60 feet of bad rock had been timbered a stretch of 150 feet of solid rock was encountered, followed by another bad streak. At the western portal it was necessary to begin timbering at once, and continue for 200 feet; then came 70 feet of hard rock, 70 of soft, 250 of hard, and then a mass of such treacherous material that the drillers could only advance foot by foot, setting up stakes to hold the roof, and roofing the heading in advance of the progress of the bench. In January, 1883, water burst into the east heading, carrying away the temporary supports, and filling the tunnel for a short distance with soft material. The bad character of the rock and the unexpected labor involved in timbering delayed the progress of the tunnel, and it is not finished at the date of the issue of this book. The elevation of the Mullan Tunnel above the sea level is 5,547 feet, the highest point being at the western approach. The elevation of the Mullan Pass at the dividing ridge is 5,855 feet. The tunnel is 3,850 feet long. Its dimensions are eighteen by twenty-three feet.

From Helena the railroad first follows the narrow valley of Seven-Mile Creek, and then the narrower gorge of Greenhorn Gulch up to the pass. The mountain grades begin three miles west of Helena, but are only sixty feet to the mile for four miles further, when the standard heavy grade of 116 is employed up to the east portal. Through the tunnel the grade is 104. There are no heavy grades on the western side of the mountain, that approaching the tunnel being only seventy-four feet. In order to make the ascent required to reach the east entrance to the tunnel, the track makes two long loops forming a letter S. The longest of these is three miles, in which only three-fourths of a mile distance is gained, but the elevation gained is 302 feet. A short tunnel 533 feet long, called the Iron Ridge Tunnel, takes the road through a mountain spur. This was driven through yellow limestone rock, and is timbered for its entire length.

The entire distance covered by heavy grades in crossing the Mullan Pass is only six miles, and at no point is the limit of 116 feet to the mile prescribed by law exceeded. At both the Mullan and Bozeman passes the policy of the Northern Pacific engineers was to concentrate the resistance of heavy grades in as short a distance as was feasible within the prescribed limitation of grade, in order that the application of extra power to overcome such resistance might be made on a few miles only of road and the usual operating methods speedily resumed. By this plan the entire length of heavy grades, ascending and descending, over the Bozeman and Mullan summits and the third high summit in the Corsican defile beyond Missoula, described in the following chapter, is reduced to about eighteen miles.

The aspect of the Main Divide of the Rocky Mountains, when approached from the west, is very different from that presented by the eastern slope. Instead of towering crags, gigantic walls of granite, precipitous ascents and deep ravines, the eye encounters only gentle slopes covered in the spring and early summer with a luxuriant growth of grass and flowers, broad natural meadows, through which flow swift streams, and belts of evergreen forests. It is difficult to realize, when emerging from the western portal of the Mullan Tunnel, that one is on the summit of the great water-shed mountain range of the American continent. Only a few miles west of the tunnel the railroad resumes its standard grade of one foot to the hundred, and follows the course of the Little Blackfoot River down into the deep valley of a stream which bears many names in different parts of its course, and is here called the Hell Gate. This fine river, heading in the mountains near Butte, is first called the Silver Bow, then the Deer Lodge, then the Hell Gate, then the Missoula and finally Clark's Fork of the Columbia.

Thus far in the description of the road we have followed the line from east to west, in the order of its construction, division by division. From Wallula, on the Columbia River, to the valley of the Little Blackfoot, the road was built from west to east, the point of junction of the tracks advancing from the two sides of the Continent being a few miles west of the Mullan Tunnel. The reader is now asked to turn to the valley of the Columbia at Wallula, the place selected for a junction with the main line of the Oregon Railway and Navigation Company, and follow the progress of the road across the plains of Eastern Washington and up the valleys of the Clark's

Fork, the Flathead, the Jocko and the Hell Gate to the western slope of the Rocky Mountains.

The construction of the Pend d'Oreille Division was determined upon by the Northern Pacific Board, as we have seen in the historical part of this work, in the spring of 1879. It begins at Wallula, and extends in a general north-easterly direction to Lake Pend d'Oreille, and thence around the Lake and up the Clark's Fork to Heron, a distance of 269½ miles. The maximum grade going east is 52 feet to the mile, and going west 34 feet, and the line is characterized by directness as well as by easy grades, there being in 200 miles of distance 150 of tangents. Construction work necessarily began at the western end of the division, where the Columbia River served as a base of supplies. There were at that time no settlements along the surveyed route of the road, save a trading post at Spokane Falls. The country is for the most part a grassy plain, except near the Columbia, where there is a small area of sage-brush desert, and no timber is found until the vicinity of the lake is reached. A little grading was done in the fall of 1879, but operations were not vigorously begun until early in 1880. During that year the grading was completed from Wallula as far eastward as Rathdrun, 189 miles, and track was laid from Wallula to the south bank of the Snake River, and from Ainsworth, on the north bank of that stream, 48 miles further, to Twin Wells. At the close of the season the grade was 124 miles in advance of the track; an unusual thing in railroad building in a new country, where the advancing track is the only base of supplies. This circumstance resulted from the delay in procuring ties and bridge timber. The country traversed by the line was bare of trees, and the nearest available forests were on the Yakima River, a stream which empties into the Columbia above the mouth of Snake River. Parties of workmen were sent up into the foothills of the Cascade Mountains in the winter of 1879-80, to cut ties, piles, and bridge timber, ready to be floated down the Yakima in the spring freshet. The "drive," for some reason, did not come down, and was left stranded up the river, so that there were no ties all the summer of 1880, and supplies for the grading camps had to be hauled in wagons. In the spring of 1881 the "drive" was got afloat, and came rushing down pell-mell, on top of a powerful freshet, which broke the booms, and scattered ties and timbers all down the Columbia River. Much of the material was picked up, but a portion was carried out to sea. Enough was saved to complete the track to the forest region east of Spokane Falls, where there was no lack of good timber for railroad uses. The track reached the shore of Lake Pend d'Oreille January 9th, 1882.

The crossing of Snake River at Ainsworth is at present effected by a transfer boat which carries an entire passenger train. A bridge is in process of construction, however, and will be completed before the high-water season of 1884, and, next to the Bismarck bridge over the Missouri River, will be the most important structure of the kind on the entire Northern Pacific line. Its length is 1,541 feet, and it is composed of a span of 125 feet, a draw span of 350 feet, with 158 feet of clear waterway on each side of the pivot pier, three spans of 250 feet each, and two spans of 158 feet each. The piers are of granite, and are seven in number, including the pivot pier, their average height being sixty-two feet. They rest on a solid rock foundation. All were built in open caissons except two, for which pneumatic caissons were required. The abutments are also of granite, and are forty-three feet high. The superstructure is an iron truss of the most approved pattern, the lower line of which is twelve feet above the extreme known high-water mark. The Spokane River is crossed east of the town of Spokane Falls by a single span Howe truss bridge 200 feet long, with an open truss approach on either side sixty feet long. As the railroad approaches Lake Pend d'Oreille from the west, the country becomes broken with ridges and deep ravines, and much trestle and piling is required. Within three miles of the lake there are three trestles—one 2,000 feet long, one 1,400 feet, and one 1,300 feet. Then comes the long pile bridge across an arm of the lake to Sand Point, the end of the division, which is 8,400 feet long, with a draw of ninety-four feet. Six hundred feet of this structure runs across such deep water that piles of from 90 to 100 feet in length are required.

During the construction operations the portion of the road between Sand Point on Lake Pend d'Oreille, and the crossing of the Flathead River, seven miles above the junction of that stream with the Missoula (the two forming the Clark's Fork or Pend d'Oreille), a distance of 130 miles, was called the Clark's Fork Division. It was by far the most difficult division to construct of the entire Northern Pacific line, and much the most expensive. For its whole length it traverses a forest, and save for a few miles on the eastern end, where the timber growth is open and park-like, this forest is of phenomenal density, the trees standing so close together that they seem almost to form a solid rampart of trunks. Pine, fur, spruce, cedar, and tamarack constitute this remarkable growth. A thick undergrowth covers the ground, and the interlaced branches overhead make a sombre twilight of the brightest noonday glare. The forest was but one of the obstacles to railway building, however. No valley proper is formed by the river, which flows for about a hundred miles through a tremendous gorge. The mountains rise abruptly from the edge of the swift green stream, in some places in towering walls of slate rock, in others in exceedingly steep timbered slopes. Here and there in the cañon elevated benches of a few miles in length occur, which were eagerly occupied by the engineers as welcome respites to the enormous labor of digging and blasting a roadbed out of rocky walls or precipitous and treacherous slopes; but a considerable part of the line is steep side-hill work or blasting through places where the mountains thrust bare shoulders of rock into the river.

The management of the Northern Pacific Company had been changed in September, 1881, by the accession of Mr. Villard to the presidency. Mr. H. Thielsen, the chief engineer of the Oregon Railway and Navigation Company, became supervising engineer of the Clark's Fork Division, and the work, instead of being let by contract, was done by the Company under the charge of a superintendent of construction, Mr. J. L. Hallett. Chinese labor, the only kind obtainable in large quantity on the Pacific slope, was employed in the clearing of the line and the grading.

Lake Pend d'Oreille may be said to be a widening of Clark's Fork. After passing around it on the north to avoid the high and precipitous mountains on the western side, the railroad runs through a forest of fir and cedar for twenty-four miles, crossing, by a pile bridge 100 feet long, a bay into which flows Pack River, and coming to the Clark's Fork four miles above its entrance to the lake. Most of the work through the woods and swamp along the lake shore was done in the winter of 1881–2, in spite of heavy snow-falls. Thousands of men were engaged at times in shoveling the snow from the line in order that the grading and track-laying might proceed. As soon as the opening of spring brought welcome relief from the snow troubles, high water on the river became an obstacle to the building of bridges, and the wagon road which had been built at great labor and expense to transport supplies to the grading camps got into such a bad condition that four horses could barely draw a load of one thousand pounds, and most of the animals had to be withdrawn for a time from work on the grade to haul food and forage. Great assistance was obtained from a little steamer built upon the lake and named the *Henry Villard*, but this could only run about twelve miles up the river, owing to the obstacle of the Cabinet Rapids. A second steamer was put upon the river above the Rock Island Rapids, in the summer of 1882, the hull having been built on the spot, and the machinery at the Dalles, in Oregon; but an error of the builders made her draft too great for her to be of service at a low stage of water. It should be remarked that no wagon road existed in the Clark's Fork gorge until the Railroad Company constructed one as an essential preliminary to building its line, the only means of getting through the country having been a rude bridle-path traveled by Indians, fur-traders and gold-seekers, over which pack animals could be got with no small difficulty at a rate of progress of twelve or fifteen miles a day; and this trail was not on the side of the river followed by the road, where the work was most serious.

The bridge at the first crossing of Clark's Fork is a five-span Howe truss, 800 feet long, with a trestle approach of 600 feet. The river is crossed again, fifty miles further up, by a Howe truss bridge of three spans, 480 feet long in all and ninety feet above the river, approached by 600 feet of trestle; and a third time, seven miles above the junction of the Flathead and Missoula, by 750 feet of truss with 300 of trestle approach. The purpose of the first and second crossings is to avoid the Blue Slide, an immense sliding mass of clay 1,000 feet high, and impossible to pass with a railroad.

In the rock work Mr. Hallett employed a method new in railroad construction, which he had first successfully used on the Columbia River line. The old way of cutting a roadbed along the face of a cliff was to begin at the top, drill small holes and blow off the rock, little by little, down to grade. Mr. Hallett began at the bottom, a little below grade, made a number of T-shaped tunnels, filled them with great quantities of powder, and touched them all off at the same moment by electricity. The effect was stupendous, the whole side of the mountain wall being lifted up and hurled into the river. Great saving in time and money was thus effected. A similar method was applied to through cuts by means of perpendicular shafts and lateral galleries. One cut 24 feet deep by 400 feet long was excavated by a single blast of giant powder, most of the rock being thrown entirely out, and the rest so broken up that it was readily removed by derricks.

Between the first and second crossings the road passes through extensive clay deposits for a distance of about forty miles, known by early travelers as the Bad Lands. These gave great trouble to the construction force by heavy slides. One of these slides was probably unrivaled in its extent and suddenness by anything known in the history of railway building. In April, 1883, a surface area of forty acres, covered with trees, slid off into the river, carrying the track with it, and partially obstructing the river. The track sunk down to a depth of sixty feet below the grade, and a chasm was opened 1,300 feet in length. The mode adopted where slides filled up cuts was to reopen the cuts with steam excavators and then drive a line of piles twelve feet from the centre of the track and four feet apart, cut them off six feet above the track, cap them, and make a wall of logs behind them to hold up the clay slopes.

The grading on the portion of the line between the bridge over the Flathead River known as the "third crossing," and the Mullan Tunnel, about 200 miles, was done in 1882 by Mormons from the settlements in Northern Utah, who came with their families and teams and took sub-contracts on the road. They proved an excellent class of laborers, and coming as they did into the gap between the eastern and western divisions of the railroad, where workmen could not, without considerable difficulty and heavy expense, be thrown in, either from the Pacific slope or from the East, their services were of great value. In the building of the road across the Flathead reservation, a distance of about 60 miles, their sobriety and general good behavior prevented trouble with the Indians. Right of way across this reservation was obtained after negotiations conducted by a Government commissioner with the chiefs of the Flathead, Kootenai and Pend d'Oreille tribes, occupying the reservation, on payment by the Railroad Company of $5,000.

Leaving the valley of the Flathead near the third crossing the road follows the narrow valley of the Jocko and then the course of Findlay Creek up to the summit of a spur of the Rocky Mountains. For the ascent and descent the mountain grade of 116 feet to the mile is adopted, the entire length of heavy grade being 13 miles. The summit is nearly level for 3 miles. The descent is through a deep narrow gorge known as the Coriacan Defile. At the eastern entrance to the Coriacan Defile is a trestle known as the O'Keefe trestle, 112 feet high, and 1,000 feet long. A still more formidable trestle crosses the Marent Gulch in the defile. It is 226 feet high and 860 feet long, and is one of the highest bridges in the United States. The stream that comes down the gulch is of inconsiderable size, but the gulch itself is a deep gorge, and the grade of the road, carried high up on the steep mountain sides to attain the summit of the pass, crosses it at the great height mentioned. The superstructure of this remarkable bridge is a Howe truss resting on eight towers.

It would have been practicable to avoid crossing the mountain spur by following the Missoula River up from its confluence with the Flathead, but the alternate route was never seriously contemplated after the country had been examined by Chief Engineer Roberts in 1869, because of the long detour made by the stream, which would have added about thirty miles to the length of the road between the town of Missoula and the junction of the two rivers.

From the town of Missoula to the mouth of the Little Blackfoot River, a distance of 75 miles, the railroad follows the course of the Hell Gate River, which runs through a narrow valley hemmed in on either hand by steep mountain ranges. The valley makes an admirable route for a railroad. On one side or the other there is always a considerable stretch of level bottom land. The engineering problems on this part of the Northern Pacific line concerned first, the management of Gold Creek, the pioneer placer mining stream of Montana, on which considerable hydraulic mining is still done and which carries down to its mouth large quantities of "tailings." The mouth of the stream was narrowed by two dikes, so as to be easily crossed by a short bridge. Next there was the question whether to bridge the river where it shifts from side to side or to keep the road on one side and cut a roadbed out of the bluffs, as was done on the Yellowstone. This was decided in favor of bridges—a safe decision, because the stream, fed by the gradual melting of the snows on the high mountain ranges, rises steadily and is not subject to sudden freshets, its high-water mark varying but a few inches from year to year. At two points bridges were avoided by cutting new channels for the river so as to straighten its course and throwing dikes of piles, brush and rock across the old channel. Between the Little Blackfoot and Missoula the river is crossed ten times, the largest bridge having two spans of 220 feet each. There is also a long bridge across the mouth of Bear Creek, having four spans of 66 feet each. All these bridges are wooden truss structures built from the timber of the adjacent country and resting on cribs of plank filled with stone. They will be replaced in time by durable iron bridges. The line through the Hell Gate Cañon is a low embankment for nearly its entire length, and having no cuts will not be obstructed by snow, which falls to a considerable depth in the valley.

CHAPTER XLV.

THE COLUMBIA RIVER LINE AND PACIFIC AND CASCADE DIVISIONS.

The Columbia River Line of the Oregon Railway and Navigation Company—Its Relations to the Northern Pacific System—A Roadbed Blasted from the Face of Precipices—Fifty Thousand Pounds of Powder used in a Single Blast—Other Lines of the Oregon Railway and Navigation System—The Pacific Division of the Northern Pacific Company—From Portland to Puget Sound—First Construction Operations on the Pacific Coast—The Cascade Division—An Important Coal Road—W. Milnor Roberts' Report on Building across the Cascade Mountains—The Seattle Extension.

THE Columbia River line of the Oregon Railway and Navigation Company may be regarded as one of the links of the Northern Pacific transcontinental system. Although owned by a separate company, its general management is identical with that of the Northern Pacific, the president of both companies being Henry Villard, and a controlling interest in the stock of both being held by the Oregon and Transcontinental Company, a permanent harmony and close alliance are assured. The Northern Pacific has the right under its charter to build a line of its own down the Columbia to Portland, but the prior construction of the river road of the Oregon Railway and Navigation Company, and the unity of interest and direction effected by Mr. Villard, relieved it from the necessity of building such a line at a time when all its resources and energies were demanded for completing its road and joining its tracks in Montana. The question of building a second line down the Columbia was left open until the Northern Pacific could wisely, in the light of its financial resources, decide it affirmatively. Such a line following the north bank of the river is now under construction.

From Wallula, where the Pend d'Oreille Division of the Northern Pacific joins the main line of the Oregon Railway and Navigation Company, the distance to Portland is 214 miles, and, with the exception of the last forty miles, the railroad runs for the whole way in the narrow gorge of the Columbia, cutting through the steep basaltic cliffs, and crossing on trestles the numerous ravines which serve as channels for the smaller streams. The heaviest work is between the Dalles and Bonneville, a distance of forty-five miles, where the river has forced its way through the tremendous barrier of the Cascade Mountains. In many places on this portion of the line the mountains rise in sheer precipices from the water's edge. The roadbed had to be blasted out of the face of the lofty walls, and the workmen were suspended by ropes from the summits of the cliffs while drilling for the first blasts. Enormous quantities of powder were used in single blasts to throw down great masses of rock into the river. The largest quantity exploded at one time was 1,000 cases of fifty pounds each, which was placed in drifts run into the face of the cliff above tunnel No. 3. The drifts were from 50 to 75 feet long, with lateral chambers at the end of each, and were 150 feet apart. The cliff had a vertical height of 450 feet above the river, and at its base the water was 125 feet deep. The powder in the drifts was fired at the same moment by electrical sparks, and the whole face of the cliff was thrown into the river. A shot fired at another point on the river was even more successful in regard to the quantity of rock displaced. Here the track had already been laid around a shelving bluff, but there was so much trouble from slides that a remedy was sought by blowing off the shoulder of the sloping mountain. Drifts were run in for

123 feet, at an elevation of 470 feet above the track, a footpath first being cut around the cliff for the laborers. The powder and the material for tamping the drift were passed from hand to hand along a line of men stationed on this dizzy path. The amount of powder used was 470 fifty-pound cases, and the blast threw down 140,000 cubic yards of rock.

It may well be doubted whether there is an equal mileage of railroad anywhere in the United States, the building of which involved as much labor as that from the Dalles to Bonneville, at the foot of the Lower Cascades of the Columbia. No bottom-lands are found along the river in the entire distance, and where the road is not cut out from the mountain-sides or from lofty basaltic escarpments, it runs across profound ravines, where high embankments or trestles are required. There are eight and a quarter miles of trestle on this part of the line, much of which will, however, be replaced by embankments. Between the Dalles and Wallula the work is much lighter. Although many bluffs are cut through, there are numerous long benches or stretches of bottom land between the bluffs and the river. Below Bonneville the road leaves the river and runs across the level delta formed by the Willamette and the Columbia.

Construction began on this line in 1880 between Wallula and Celilo under the direction of chief engineer H. Thielsen. In the fall of 1881 the grade was completed as far down as Bonneville, and track-laying was finished so that the road was operated to Bonneville in the spring of 1882. The remaining section of the line, from Bonneville to Portland, was opened in October of that year.

In this connection a few words may properly be said concerning other lines built by the Oregon Railway and Navigation Company as a part of the efficient transportation system it has established in the State of Oregon.

From Umatilla, 209 miles above Portland, a branch road leaves the Columbia, traverses the fertile wheat-producing plains of Umatilla County, crosses the Blue Mountains to the beautiful grain and grazing valley of the Grande Ronde, reaches the Powder River Valley and the mining districts around Baker City, and will finally effect a junction with the Oregon Short Line branch of the Union Pacific Railroad at the Snake River. This line is now open to the Blue Mountains, and will be finished in 1884. The main line continues eastward above Wallula, where it joins the Northern Pacific Railroad, to Walla Walla, the most important town in the great interior basin of Oregon and Washington. From that town there is a branch south to Pendleton, 46 miles, one north to Riparia 37 miles, whence steamboats belonging to the Company run up the Snake River to Lewiston 78 miles, and diverging from this branch at Bolles Junction, a line to Dayton, 13 miles, soon to be extended to Pataha City, 37 miles further. This system of railroads, supplemented by steamboats on the Columbia and Snake Rivers, drains all the rich, newly developed wheat and cattle country lying south of Snake River, between the Bitter Root and Blue Mountains, on the east and south, and the Cascade Mountains on the west.

THE PACIFIC DIVISION.

The railroad line from Portland to Puget Sound belongs to the Northern Pacific Company, and is called the Pacific Division. It is linked, as we have seen, to the main line at Wallula by the river road of the Oregon Railway and Navigation Company. The section of the Sound line immediately west of Portland will be finished this summer (1883). It follows the Willamette River to its mouth, and then the Columbia to a crossing place about two miles above a point opposite the town of Kalama and about forty miles from Portland, where trains will be ferried over the Columbia on a large transfer steamer.

The line from Kalama to Tacoma, on Puget Sound, is, next to the Minnesota Division, the oldest portion of the Northern Pacific road. The Act of Congress of 1870, amending the charter of the Company and making the line down the Columbia to Portland and thence to the Sound the main line, and that across the Cascade Mountains to the Sound a branch, provided that twenty-five miles of road between the Columbia River and the Sound should be built within a year from the date of its passage, and that the whole road should be opened to its terminus on the Sound before the close of 1873. In obedience to these provisions of law, the Company began to build, in April, 1871, from Kalama, a new town on the Columbia nine miles above the mouth of the Cowlitz River. There was no question as to the route to be adopted to reach the Sound. Nature seemed to have marked out the valley of the Cowlitz as an easy route for railroad construction. This was the route followed by General (then Captain) McClellan in the prosecution of the Government surveys in 1853, and it was in 1871 the route of the wagon and mail road leading from the Columbia River to Olympia, the head of navigation on the Sound, and the capital of Washington Territory. The surveyed line of the railroad followed the Cowlitz for about forty miles, crossed a low divide to a tributary of the Nisqually River, which flows into Gray's Harbor on the Pacific Ocean, then crossed a second divide to the Nisqually, and then ran across level gravelly prairies until near the Sound, when it ran down to the level of the tide at Commencement Bay, by a sharp descent. There are no grades on the line greater than fifty-two feet to the mile save for two miles up from the Sound, where the heavy grade of 116 feet to the mile was adopted. An easier grade will soon be secured at that point. The Cowlitz and the Nisqually are crossed by wooden truss bridges. No heavy cuts or high embankments occur, and the line was in all respects an easy one to build, except the clearing of the dense forest growth which covered the face of the country for nearly the entire distance. It was made expensive, however, by the high cost of labor and supplies, and the necessity of transporting iron, locomotives and cars over the long sea route around Cape Horn.

Only twenty-five miles of the division were built in 1871. Next year fifty miles more were constructed. Work was begun anew in the spring of 1873, but the collapse of that year found the road still twenty-two miles from its terminus at Tacoma, on the Sound. For a short time work was continued without interruption, but there was no money to pay the laborers, and after ten miles more of track had been laid the men took armed possession of a bridge across Clover Creek, and declared that the road should go no further until they got $73,000 then due them. In this emergency Capt. J. C. Ainsworth, then managing director for the Pacific Coast, came to the rescue with his individual means and credit. A compromise was made, the men received a part of their wages in cash and a part in due bills indorsed by Capt. Ainsworth, and went to work again. By great effort the track was completed to the Sound just twenty-four hours before the time prescribed by Congress expired.

THE CASCADE DIVISION.

Many fruitless attempts were made by the Northern Pacific Company to find a pass through the Cascade Mountains of sufficiently low altitude and easy approach to favor the construction of a direct railroad line from Eastern Washington to Puget Sound. Almost every pass in the whole range between the Columbia River and the British boundary that offered any apparent encouragement to the eye of an engineer was explored, but it was not until about a year ago that one was discovered where the estimated cost of constructing a road, and of operating it when once built, was not too great for the undertaking to meet with any favor from practical railroad men. At last the long-sought gateway in the lofty mountain wall was found at the Stampede Pass. A long tunnel will be required at the summit of this Pass and the approaches involve much difficult work, but the line is practicable and will be built.

The portion of the Cascade Division generally known as the Puyallup Branch, was built in 1876 from Tacoma to the Wilkeson coal field, near the sources of the Puyallup River, on the eastern base of the Cascade Mountains, a distance of thirty miles, and a short spur was afterward built to Carbonado, two miles further, to reach a mine sold by the Northern Pacific to the Central Pacific Railroad Company. On the eastern end of the Cascade Division construction is in progress the present season in the valley of the Yakima, the purpose being to build from a connection with the main line near Ainsworth up to the eastern base of the mountains, leaving to be built, at some time in the near future, the connecting link across the rugged range of the Cascades. The length of this division, from a junction with the main line 3 miles from Ainsworth, to Tacoma, is 240 miles.

In this connection an extract from a report of the late Chief Engineer Roberts is of interest. The report was written on Puget Sound October 3d, 1872, and addressed to the Board of Directors. It discussed with a thoroughness characteristic of its author all the questions relating to the Columbia River route and the various lines surveyed across the Cascade range, and summed up his opinions as follows:—"Independently of land grant considerations, and if but one main line should be built, and the Company should be obliged to choose between the line via the Columbia River, on the one hand, and the route over the Cascade Mountains, on the other hand, my present information would lead me to recommend the valley route, notwithstanding its much greater length. Granting that the valley route may be a hundred or a hundred and fifty miles longer (depending, of course, upon what point along the Sound is to be assumed), the saving of 6,000 feet of rise and fall over the Skagit line, or 4,000 feet over the Snoqualmie line, goes far toward reducing the lines practically to a par as to length. Secondly, the valley route avoids the snow difficulty. Thirdly, it runs through, or so as to command the business of Portland, the commercial capital of Oregon, and so as to secure the trade and travel of the Willamette Valley, the most valuable on the Pacific coast. Fourthly, on the valley route the Company can start their road, building 350 miles from the Sound to open it eastward, and running it in connection with the O. S. & N. Company's steamers and railroads along the Columbia, meanwhile pushing the track eastward into a region which admits of settlement."

Time has justified the opinions thus early formed by the great engineer—opinions which led the Company to prefer the longer route to Puget Sound by way of the Columbia and the Cowlitz valleys to the shorter one across the mountains for the main line to be first built. The ultimate completion of the Cascade Branch is, however, assured by the action of the Company in building up to the base of the range on both sides. In spite of the great expense of snow-sheds, heavy grades, and a long tunnel, the evident value of a short line from the grain fields of the interior to the deep waters of the Sound will induce the completion of this branch at no distant day.

THE SEATTLE EXTENSION.

The Seattle branch or extension, connecting the town of Seattle with the Cascade Branch of the Northern Pacific, and thence with the main line at its terminus at Tacoma, was built by the Oregon and Transcontinental Company in the summer of 1883. Its length is thirty miles, nine of which is a widening of the narrow-gauge coal road running from Seattle to Newcastle. There are four bridges and five miles of piling across swamps. The ground is heavily timbered, and construction work was rendered difficult by the wilderness character of the country and the extensive swamps traversed in the valleys of the Stuck, the White and the Dwamish rivers. The junction with the Cascade Branch is made near the village of Puyallup, ten miles east of Tacoma, and the line, being operated by the Northern Pacific Company, gives Seattle the advantage of a connection with its general system, as well as with the Columbia River, Portland, Oregon and California.

CHAPTER XLVI.

AID RENDERED BY THE ARMY.

Hostility of the Indians along the Northern Pacific Line—Warlike Character of the Sioux—Their Struggle for the Yellowstone Valley—General Sherman's Opinion of the Railroad Enterprise—Valuable Assistance rendered by him and his Subordinate Officers—Important Military Movements—Protection given Surveying Parties and Construction Forces—Expeditions of 1871 and 1872—Major Baker's Battle in the Yellowstone Valley—Major Forsythe's Expedition—The Campaigns of 1876 and 1877 against the Sioux—Final Subjection of the Indians—The Pathway Cleared for the Railroad.

NO historical account of the Northern Pacific enterprise would be just or complete without an acknowledgment of the very valuable services rendered by the army of the United States in protecting the surveys and construction of the road, and in reducing to subjection the hostile Indian tribes along its line, and removing them to reservations, so as to open the country to settlement and civilization. When the building of the Northern Pacific began, the greater part of the country through which its line was projected between the Red River of the North and the Columbia River, was occupied as a hunting ground by warlike tribes of savages that acknowledged the authority of the Government only in an intermittent sort of way, when forced to do so by defeat and hunger. War was their trade and diversion, and they were not slow to take advantage of slight pretexts for breaking off peaceable relations with the whites. They were intelligent enough to know that the building of a railroad across the plains, where they roamed at will, meant the destruction of the buffalo, on which they depended mainly for food, the influx of white settlers, and their own confinement to small areas of territory. This knowledge added to their natural combativeness a feeling of barbarous patriotism, which urged them to a stubborn resistance to the invasion of a region which they regarded as their own by birthright. Particularly was this the case with the numerous aggregation of bands and tribes called by the general name of the Sioux, that roamed over Dakota and a large part of eastern Montana. The Sioux were good fighters, well armed, possessed of some military skill, and able to put into the field a force of warriors larger than the Government in its hard struggle with them ever matched man for man with its troops.

Gen. W. T. Sherman, the Commander-in-chief of the army, having a thorough knowledge of all the new country of the Far West, gained by long and toilsome journeys between the two frontiers—journeys which took him through every Territory and to nearly every military post—was from the first an earnest friend of the Northern Pacific enterprise, regarding it from both a military and a patriotic point of view as an agency for settling forever the Indian question in the Northwest, by throwing a belt of settlement across the chief hunting and fighting ground of the savages, and by affording the means of moving troops with rapidity, and thus of compelling the restless tribes to remain upon the reservations set apart for them. In his annual report for 1876 he spoke of the Northern Pacific as "the great Pacific Railway," and characterized it as "an enterprise of infinite advantage to the national welfare and to civilization." In the spirit of this sentence the veteran commander instructed his subordinate officers to furnish escorts to the surveying parties sent out by the Company, and to protect its engineers and laborers engaged in construction work; and he directed the movements of the troops engaged in operations against hostile tribes with a view of pushing such tribes far off the line of the projected road, which he knew would be occupied by the vanguard of settlement as fast as the locomotive moved forward into the wilderness.

The invaluable aid thus afforded by the Commander-in-chief was seconded by Lieutenant-General Philip H. Sheridan, commanding the Military Division of the Mississippi, and by Major-General W. S. Hancock, who was in command of the Department of Dakota, embracing northern Minnesota, Dakota and eastern Montana, from the time when construction began upon the Northern Pacific road until 1878, and by his successor, General Alfred H. Terry. This department was a part of the Lieutenant-General's military division. Major-General Irwin McDowell, commanding the Military Division of the Pacific, and Brigadier-Generals E. O. C. Ord, George Crook, O. O. Howard and Nelson H. Miles, commanding successively the Department of the Columbia, also rendered valuable assistance to the railroad enterprise in the territory west of the Rocky Mountains. In the limits of a single brief chapter it is not possible to fittingly recognize the services of the many subordinates of these general officers, who, at lonely military posts, on fatiguing scouting expeditions, or in deadly combats, contributed to the success of an enterprise which has given to agriculture and commerce, for peaceful homes and prosperous communities, the last domain of savages in the United States.

Some brief account of the more important military movements and expeditions undertaken in behalf of the Northern Pacific may properly be given here. The party sent out by Jay Cooke & Co. from St. Paul in 1869, under charge of Governor Marshall, of Minnesota, to make a reconnaissance as far as the Missouri River, was furnished with an escort by General Hancock. The party which left the Pacific coast the same year in charge of Chief Engineer Roberts, and penetrated as far eastward as the head of the Yellowstone Valley, was given aid and protection by the commander of Fort Ellis, near Bozeman, Montana. In his annual report for 1871 General Hancock thus referred to two expeditions sent out that year: "In connection with that great national enterprise, the construction of the Northern Pacific Railroad, two detachments are now in the practically unknown and unexplored region lying between the Missouri River and the Rocky Mountains, in the general direction of the course of the Yellowstone, in the protection of surveying parties on the road engaged upon a reconnaissance to ascertain if a practicable route therefor is to be found from the junction of the Heart River with the Missouri, nearly due west to the Yellowstone, near the mouth of Powder River, and thence up the Yellowstone to a practicable pass in the Belt range of the Rocky Mountains." The first of these expeditions consisted of 400 men of the 20th and 22d Infantry, under command of Major J. N. G. Whistler, escorting a well-armed surveying party. It left Fort Rice on the 9th of September, reached the Powder River, and returned without encountering hostile Indians. The second expedition, under Captain Edward Ball, of the 22d Cavalry, was composed of two companies, which left Fort Ellis, Montana, September 16th, to escort the railroad engineers in their examination of the Belt range of mountains, and returned without mishap. Smaller escorts were furnished the same year to the company's surveyors engaged in running lines between the Red River and the Missouri. In 1872 General Hancock stationed a company at Bismarck to protect the railroad stores and supplies, and another at the present site of Jamestown, Dakota, where a post called Fort Seward was established. Several companies of the 20th Infantry encamped that summer along the line of the railroad between Fargo and Bismarck to protect the workmen.

In his report for 1872 Gen. Hancock says: "The Indians of the plains, through some of their chiefs, notified us that they intended to resist the building of the Northern Pacific Railroad west of the Missouri, and notwithstanding that threats of Indians are not always followed by attacks, in this case it proved that they were not entirely idle, as attacks more or less formidable were subsequently made by them upon commands sent as escorts to railroad surveying parties during the summer and fall on the Missouri and along the Yellowstone rivers. On the 29th of June I received instructions from the Lieutenant-General to prepare two commands as escorts for two surveying parties of the Northern Pacific Railroad, one to proceed from Fort Rice on the Missouri River about 240 miles and return, the other to start from Fort Ellis, Montana, proceed to the mouth of Powder River, 310 miles, and return by way of the Musselshell River."

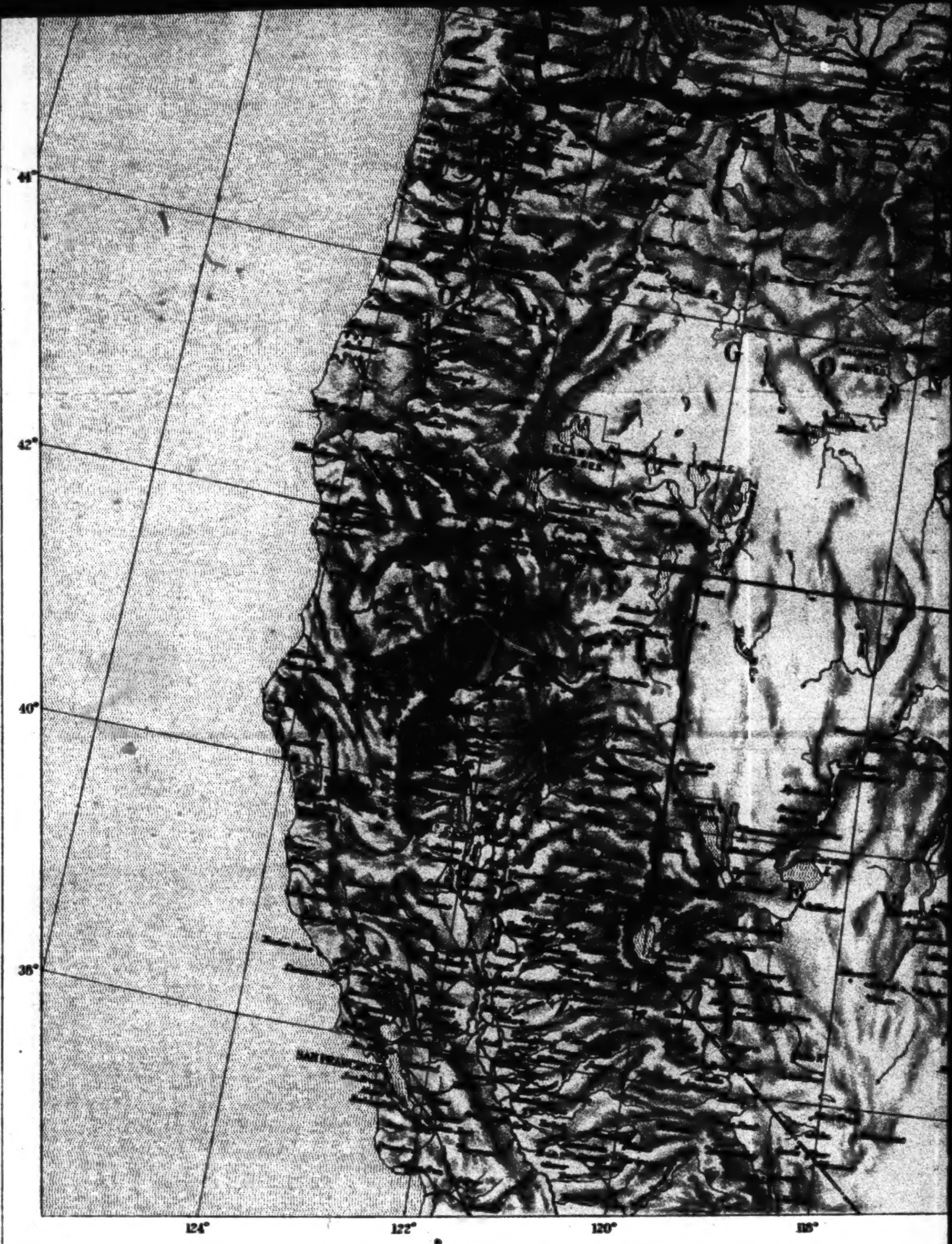
A subsequent report gives an account of these expeditions. The first, under command of Col. D. Stanley, 22d Infantry, was composed of 600 infantry. It reached the Powder River on the 18th of August, after numerous skirmishes with Indians, and then returned to Fort Rice. The second expedition, commanded by Maj. E. M. Baker, was made up of 400 men, of whom 182 were cavalry. It left Fort Ellis on the 27th of July, and on the 14th of August was attacked at the mouth of Pryor's Creek, on the Yellowstone, by a large body of Indians. The Indians were repulsed; but Maj. Baker apprehending an assault by a still more formidable force, only went as far as Pompey's Pillar, and then crossing the plains to the Musselshell River returned to Fort Ellis. Gen. Hancock expressed his dissatisfaction at the result of this expedition.

In December, 1872, Gen. Hancock was transferred to another department, and was succeeded by Gen. Terry. In 1873 Gen. Sheridan, commanding the military division, arranged with Capt. Coulson, who owned a line of steamboats on the Missouri, to furnish a boat to ascend the Yellowstone with supplies for a depot to be established for the protection of the Northern Pacific surveyors. The command of this expedition was given to Maj. George A. Forsythe, of Sheridan's staff. A site near the mouth of Glendive Creek was fixed upon for the new post, and troops were sent out to it from Forts Rice and Abraham Lincoln.

During the five years of inactivity in the affairs of the Northern Pacific Company which followed the commercial crisis of 1873 occurred the last great struggle with the Sioux tribes, with its terrible incident of the massacre of General Custer and his entire command of five companies of cavalry in the battle of the Little Big Horn, in 1876. The war was not ended until 1877, when the operations of Generals Crook and Miles, under the orders of General Terry, were successful in clearing the Indians out of the Yellowstone Valley and reducing them to subjection. When construction work was recommenced on the Northern Pacific line west of the Missouri in 1879, the warlike Sioux were established upon reservations and peaceably disposed, and the pathway of the railroad was open through to the Pacific slope. The Crows, who inhabit a large reservation in the Upper Yellowstone Valley, were friendly to the whites, and readily ceded for a price the right of way through their reservation. The Flatheads, through whose reservation in northwestern Montana the road runs, also made reasonable terms for right of way. The small tribes in western Idaho and eastern Washington were well disposed during the building of the road, and the military posts established at Lake

Cœur d'Alène, Colville and on the Spokane River afforded ample safeguards against any unexpected demonstration on their part. The outbreak, long retreat and final capture of the Nez Percé Chief Joseph and his followers in 1877, and the brief campaign of the Bannocks the following year, were the final chapters in the long history of Indian wars in the Northwest. The Northern Pacific Railroad has done what General Sherman predicted it would do—it has settled the Indian question in all the States and Territories it traverses. When the locomotive came the red man knew that his fight against civilization was at an end.

THE END.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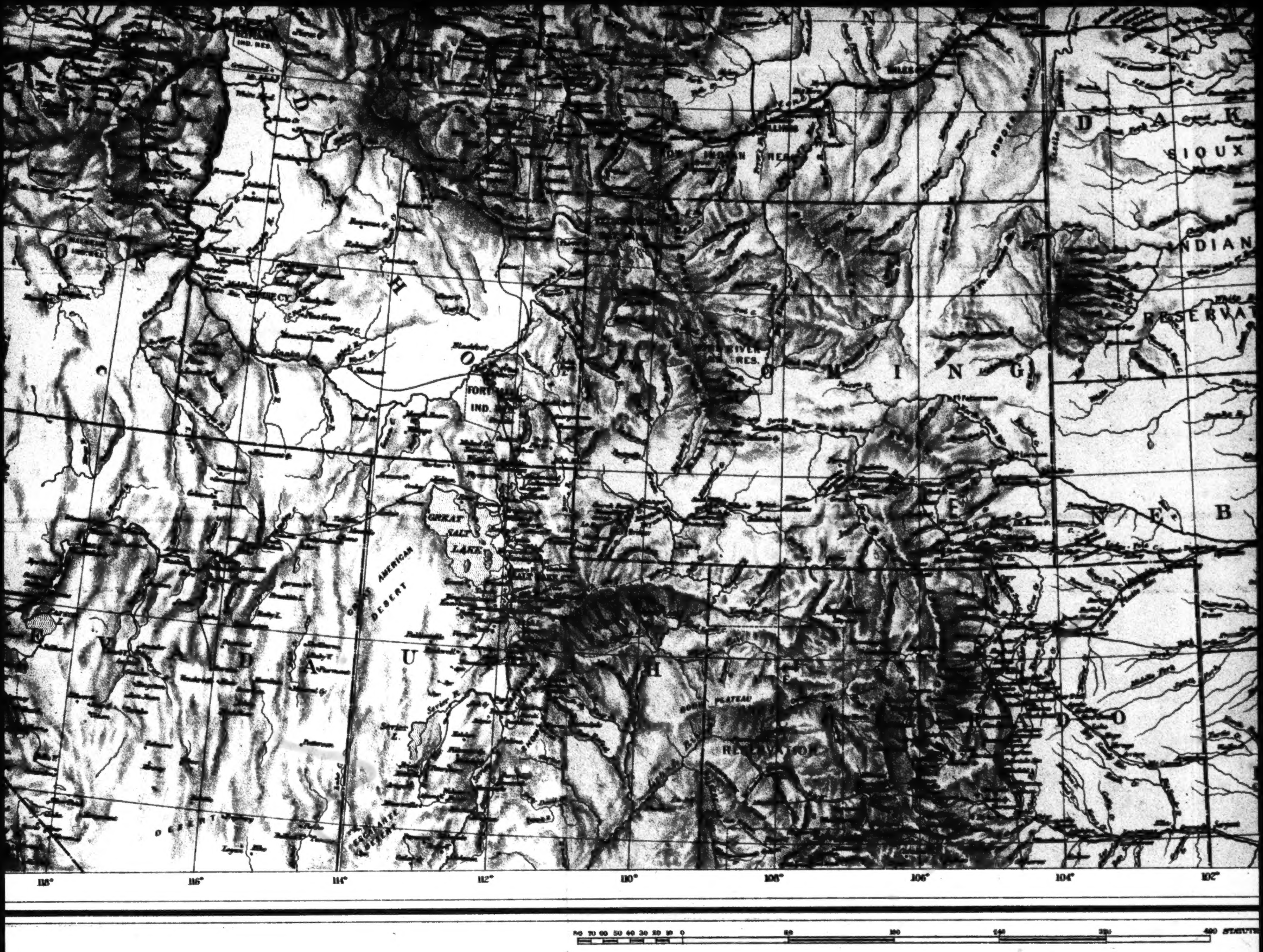
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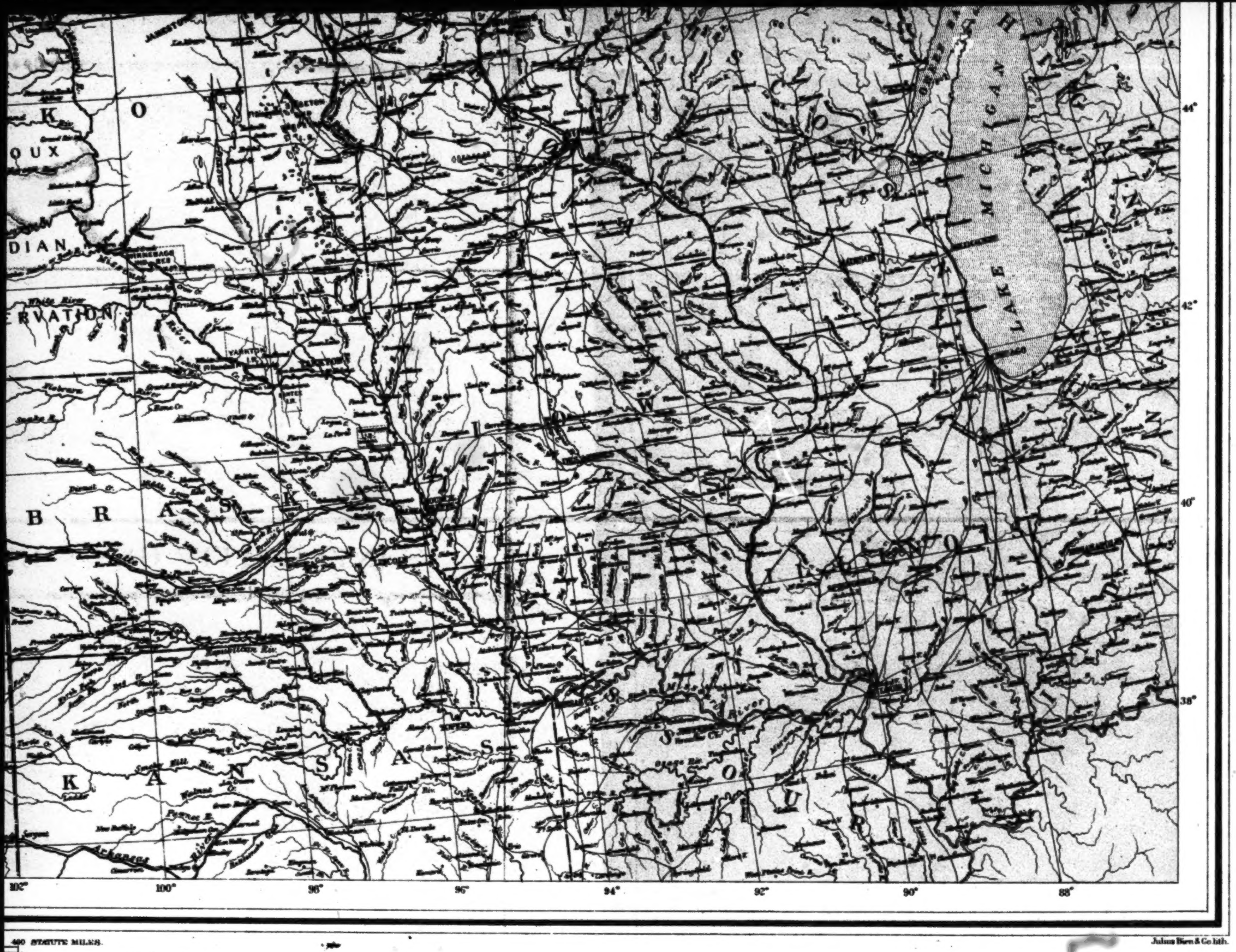
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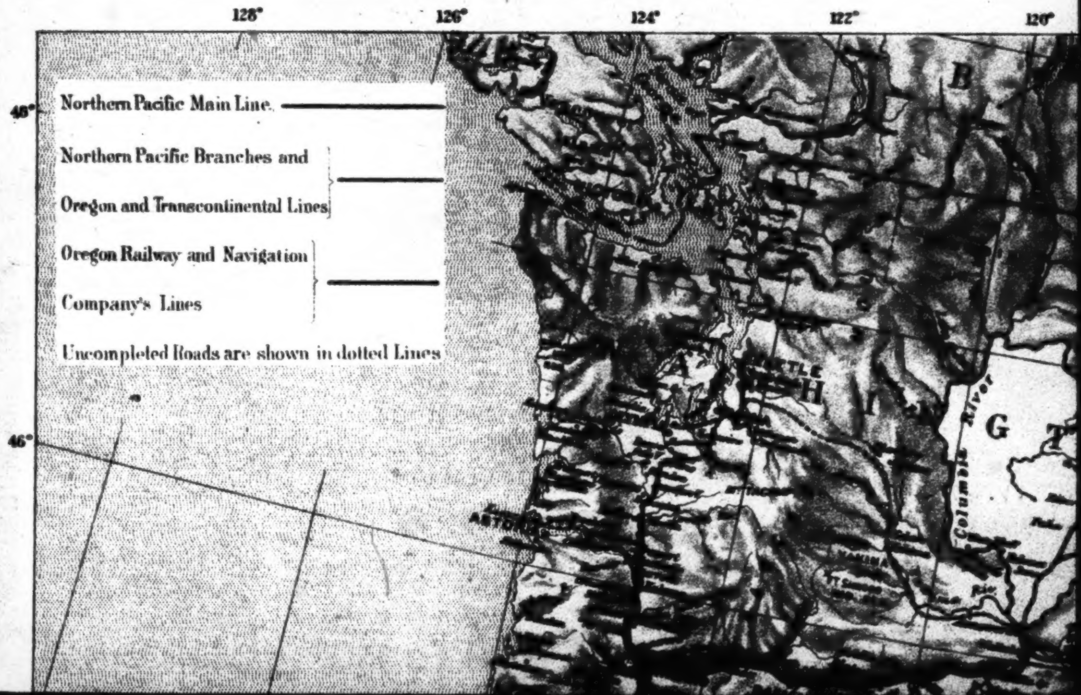
Julius Bien & Co. lith.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Northern Pacific Main Line.
Northern Pacific Branches and
Oregon and Transcontinental Lines
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Company's Lines
Uncompleted Roads are shown in dotted Lines
B
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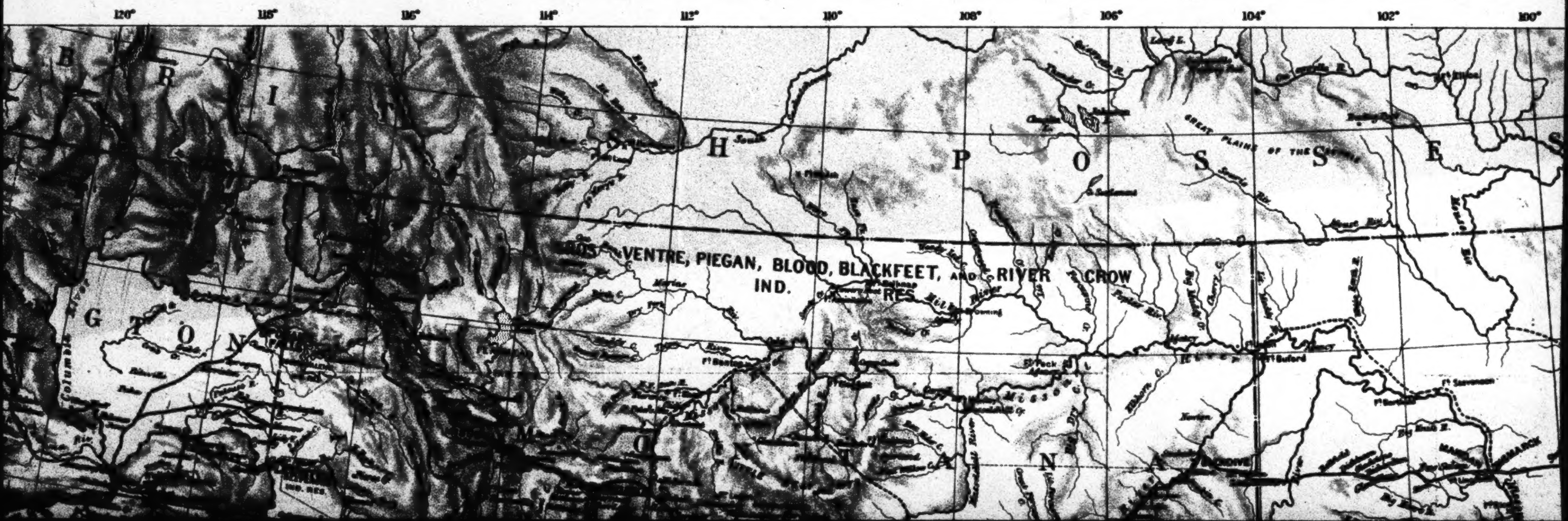
Columbia River
ASTORIA

MAP OF THE NORTHERN PACIFIC RAILROAD, ITS BRANCHES A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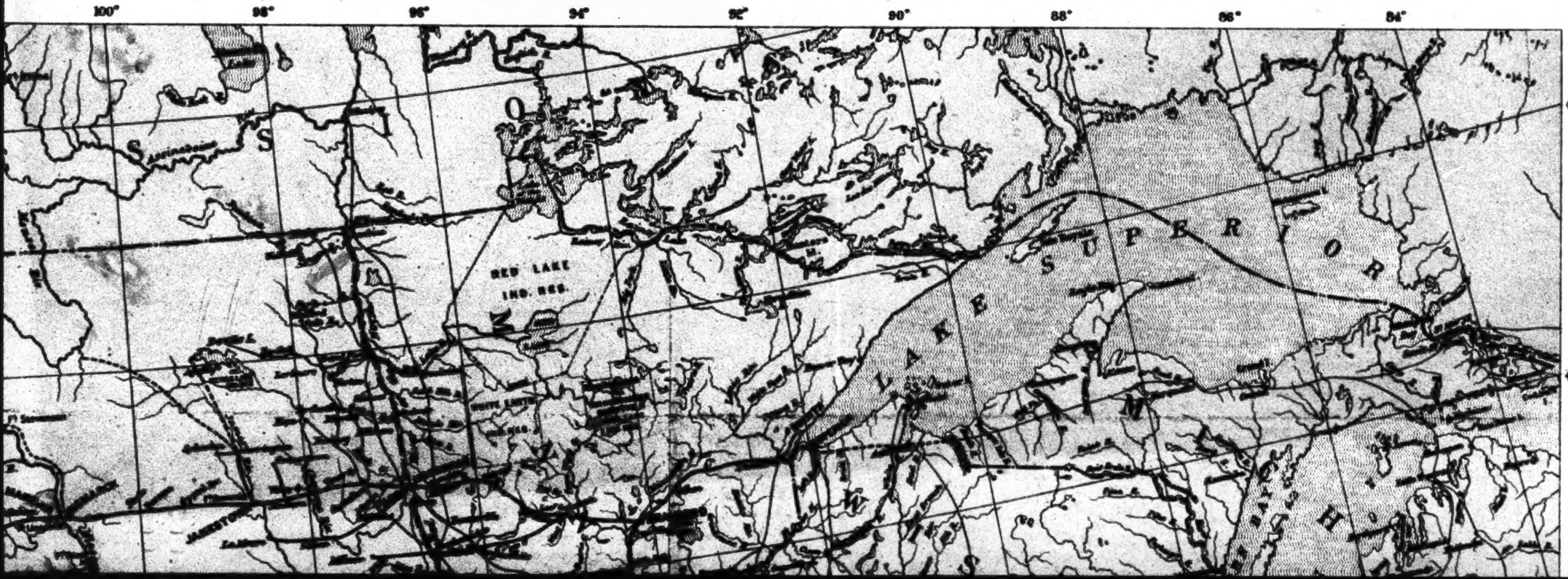
S H P O S S E S S
GREAT PLAINS OF THE
GROS VENTRE, PIEGAN, BLOOD, BLACKFEET, AND RIVER CROW
IND. RES.
G T O N
M O N T A N A
Columbia River
Ft. Benton
Ft. Peck
Ft. Buford
Ft. Stevenson
Ft. Berthold
Bismarck
Missouri
Milk River
Marias
Poplar Riv.
Mouse Riv.

HES AND ALLIED LINES.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JAMESTOWN